

Calculating 2025 Slurry Storage Requirement Yarrow Hey

Slurry production per month (based on undiluted slurry)

Livestock type on slurry or part-slurry based system	No. of livestock units on slurry on part based system	Proportion of excreta collected as slurry	Volume per livestock unit (or place) per month (m³)	Volume produced each month (m³)
1 Weaner place, 7-13kg	500	1	0.03	15
1 Weaner place, 13-31kg	1100	1	0.05	55
1 Grower place, 31 to 66kg (dry fed)	860	1	0.1	86
1 Finisher place, 66kg and over (dry fed)	860	x 1	x 0.13	= 112
1 Sow place, 66kg and over, with litter, up to 7kg, fed on diet with synthetic amino acids.	101	1	0.33	33

Total volume of slurry produced per month (m³)	A	301.13
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Calculate the average volume of rainfall that enters your slurry store(s) each month

Average Rainfall (mm)	B	97
Area of slurry stores(s) plus concrete surface area (m²)	Average monthly rainfall (B)	Average Volume of rainfall entering slurry store(s) per month (m³)
2209.00	x 97	/1000
		C
		214

Calculate the volume of wash water that enters the slurry store each month

Pig Type	Number of Pigs Places	Wash water per pig place per month (m³)	=	Monthly wash water production (m³)
Sows with litter up to 7kg	101	0.043	=	4
Weaners (7-13kg)	500	0.0086	=	4
Weaners (13-30kg)	1100	0.0118	=	12
Growers (31-65kg)	860	0.00817	=	7
Finishers (66kg+)	860	0.00688	=	6
Total monthly wash water production (m³)				D
				34

Calculate the total volume of slurry (including any dilution) that needs to be stored

A	C	D	Monthly slurry plus dilution (m³)
301.13	214.273	33.884	F
			549
Monthly slurry plus dilution (F)	6 months storage for pigs	Total volume of slurry plus dilution to be stored (m³)	
549.287	6	G	3296

Slurry Store Measurements

Ref	Earth banked store (Yes/No)	Circular Store (Yes/No)	Length (m)	Width / Diameter (m)	Working height or depth (m)	Side Run (m)	End Run (m)	Freeboard required (m)	Capacity (m³)
Underground Storage for 14 (YH)	No	No	30	x 14	x 1.2	- 0	0	0.3	378
Underground Storage for 14 (YH)	No	No	30	x 14	x 1.2	- 0	0	0.3	378
Underground Storage for 2 (YH)	No	No	55	x 12	x 1.2	- 0	0	0.3	594
Underground Storage for 6 (YH)	No	No	90	x 1	x 1.2	- 0	0	0.3	81
Underground Storage for 10 (YH)	No	No	11	x 3	x 2	- 0	0	0.3	56
Underground Storage for 3 (YH)	No	No	12	x 4	x 0.5	- 0	0	0.3	10
Underground Storage 5 (YH)	No	No	12	x 4	x 0.5	- 0	0	0.3	10
Reception Tank 2 (YH)	No	No	3	x 10	x 2.2	- 0	0	0.3	57
Reception Tank 1 (YH)	No	No	10	x 10	x 2	- 0	0	0.3	170
New Lagoon - proposed @ Tilham	Yes	No	40	x 48	x 3.75	- 0	0	0.75	5760
New Reception Pit - proposed @ Tilham	Yes	No	4	x 2.5	x 2	- 0	0	0.75	13
Total Existing Capacity =									7506

All tanks are underground at Yarrow Hey

Total capacity includes all deductions from the run and rise and also freeboard.

This holding has Sufficient Capacity

Calculation Date:

Calculating 2025 Slurry Production

Yarrow Hey

Slurry production per month (based on undiluted slurry)

Livestock type on slurry or part-slurry based system	No. of livestock units on slurry or part-based system	Proportion of excreta collected as slurry	Volume per livestock unit (or place) per month (m ³)	Volume produced each month (m ³)	How many months housed?	Total production based on months housed
1 Weaner place, 7-13kg	500	1	0.03	15	12	180
1 Weaner place, 13-31kg	1100	1	0.05	55	12	660
1 Grower place, 31 to 66kg (dry fed)	860	1	0.1	86	0	0
1 Finisher place, 66kg and over (dry fed)	860	1	0.13	111.8	12	1341.6
1 Sow place, 66kg and over, with litter, up to 7kg, fed on diet with synthetic amino acids	101	1	0.33	33.33	12	399.96
Total volume of slurry produced per month (m ³)				301		A 2582

Calculate the average volume of rainfall that enters your slurry store(s) each month

Average Rainfall (mm)	B	78
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Area of open slurry stores(s) plus concrete surface area (m ²)	Average monthly rainfall (B)	Conversion to m ³	Average volume of rainfall entering slurry store(s) per month (m ³)
2819	x 78	/1000	219
Total rainfall for 12 months (m ³)			C 2632

Calculate the volume of wash water that enters the slurry store each month

Pig Type	Number of Pig Places	Wash Water Per Pig Place per month (m³)	=	Wash water monthly production (m³)
Sows with litter up to 7kg	101	0.043	=	4.34
Weaners (7-13kg)	500	0.0086		4.30
Weaners (13-30kg)	1100	0.01118		12.30
Growers (31-65kg)	860	0.00817		7.03
Finishers (66kg+)	860	0.00688		5.92
Total wash water for 12 months (m³)				D 406.61

Total Production

Calculate the total volume of slurry (including open surface area, rainfall and wash water) that needs to be spread

Slurry produced per housing period (A)	Average volume of rainfall entering slurry store(s) per annum (C)	Average wash water per annum (D)	Total annual slurry plus dilution (m ³)
2581.56	2631.82	406.61	E 5619.99