

Aerobic ponds

Surface Area

Milkers	herd size	7,200	head			
	time on yard	24	hrs/day			
	BOD ₅ loading	0.17	kg/animal/day			
	BOD ₅ loading	70%	pre wash			
	solids removed	0%	sedimentation ponds	Surface area of pond/s	4.90	ha
heifers	herd size	11,000	head			
	time on yard	24	hrs/day			
	BOD ₅ loading	0.10	kg/animal/day			
	solids removed	0%	pre wash			
		40%	sedimentation ponds	Surface area of pond/s	8.80	ha
Total minimum surface area					13.70	ha

say	15.0	ha
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prefer	25.0	ha
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Source Feedpad guidelines for the Goulburn Broken Catchment (authors RJ Wrigley & C Dillon)
Strategic Bovine Services

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Notes

Must contain about 1000 ML
Water may be less than 3m deep
Aeration desirable throughout the year
Wave action more of a problem so need flatter internal batters

Bank

crest width	8.0	m
height	3.5	m
batters		
in 1 in	5.0	
out 1 in	2.5	

Key

depth	3.0	m
base	2.5	m
batters		
A 1 in	3.0	
B 1 in	3.0	

Dimensions - inside edge at top of bank

← pond 1 →			← pond 2 →		
Side A	700 m	@ 100%	0 m	@ 100%	
B	500	100%	0	100%	
C	700	100%	0	50%	
D	500	100%	0	100%	

Earth works

bank	73.9	m ³ /m	length	2400	m
key	34.5		X section	108.4	m ³ /m
	<u>108.4</u>	m ³ /m		<u>260,250</u>	m ³

Internal dimensions @ NSL

pond 1 long	665	m	Total area	
wide	465			310,450 m ²
pond 2 long	-35		Depth <NSL	
wide	-35			0.84 m

External dimensions @ NSL

pond 1 long	726	m	Total area	
wide	526			381,901 m ²
pond 2 long	26			
wide	26			

Water stored	@	1.0	m freeboard
	=	3.34	m deep

Above ground	824.0	ML
Below ground	<u>260.3</u>	
	1084.3	ML