

NESSIE dimensions update 1303 – Recycling of Opera SMs

Main facts

Two SMs per site	instead one
Decreased single SM z	-1m
Increased overall SM z footprint	+3m
Decreased SMs Y dimensions	
Decreased pit depth	-1m (unless NEAR displaceable)
Decreased floor load	
Other	
Decreased NEAR width (X)	-1.25
Increased ICARUS NESSIE distance	+ 1m (fringe field)

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FAR site

	new value	previous value	remarks
Pit depth -1m	6m	7m	-3.36m wrt beam @ ICM
Pit volume saved -800m ³			
Single SM mass	700t	1500t	
Floor capacity	35 t/m ²	45 t/m ²	on two belts/SM
Yokes weight	24 t		
Slab weight	2.3 t		
Slabs length	4.7m	5.85m	
Nessie HW footprint Z:	10 m	6.5m	
Nessie HW footprint X:	13.5m	13.5m	due to ACM
Nessie HW height Y:	6.65m	8m	
Nessie-Icarus distance:	2m	1m	to reduce field
Overall Icarus+Nessie Z:	36m	32m	

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NEAR site

	new value	previous value	remarks
Pit depth -1m	8.8 m	9.8 m	-2.77 m wrt beam @ ICM
Pit volume saved -660m ³			
Single SM mass	340t	800t	
Floor capacity	17 t/m ²	32 t/m ²	on two belts/SM
Yokes weight	24 t		
Slab weight	1.7 t		
Slabs length	3.5 m		
Nessie HW footprint Z:	10 m	6.5m	
Nessie HW footprint X:	9.75m	11m	due to ACM
Nessie HW height Y:	5.5m	6.5m	
Nessie-Icarus distance:	2m	1m	to reduce field
Overall Icarus+Nessie Z:	28m	22m	

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Next

- Pits length should be upgraded due to new Z footprint and distances
- NE entrance in FAR: could have platform to enter and download trucks
- Nessie Crane NEAR: 3t, 15x20m area, clearance to pit floor: 6.5m
- Control room position
- Stairs position
- Lift position, dimension and capacity
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- 850 and 300 kW Psupplies schedule seems critical

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