

ENVIRONMENTAL EFFECTS METADATA SURVEY FORM

Name of person updating the form

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Project name: Oceanlinx MK1

Planned In Operation Completed

Project description:

Project Developer: Oceanlinx Ltd.

Technology Developer: Oceanlinx Ltd.

Technology type: Floating device, Oscillating Water Column

Resource (wave, tidal): Wave

Project scale (test site, prototype, array, commercial): Single device

Installed capacity (MW): 0.5 MW

Project Website: <http://www.oceanlinx.com/projects/past-projects/>

Launch Date: January 2005

Additional Description: The Oceanlinx Mk1 full scale prototype was fitted out and first deployed in 2005. The approximately 500 tonne device used a parabolic wall to concentrate the wave energy into its 100 square metre Oscillating Water Chamber (OWC). The device made use of a Denniss-Auld turbine. The Mk1 Full Scale prototype was one of the first full scale wave energy devices in the world. Its operation between 2005 and 2009 has provided invaluable test and operational data guiding the development of subsequent designs.

Location:

Ocean/Water body:

Closest city: Port Kembla, approximately 100km south of Sydney, Australia.

Country: Australia

Depth:

Coordinates: -34.45°, 150.9°

Process status: Tests completed. Turbine testing certified by Llyods Register. Currently being decommissioned.

Licensing information (brief description): As the device was located below the high water mark, the licensing for the device fell outside the jurisdiction of the local and state authorities. It was determined that authorisation of the project was required from NSW Fisheries, Maritime Authority of NSW and Department of Lands.

A license for the area was granted by the State Department of Lands. This has rolled over from 2004 to 2011 to cover deployment of M2 and Mk3PC.

Key Environmental issues: *brief description on the most important environmental issues raised by the project (e.g. Sensitive species/habitats/areas that were of particular concern and/or received special protection) and how they were addressed.*

Environmental webpage: *link to project official environmental webpage (if available)*

Baseline studies and project effects studies: Oceanlinx MK1				
General description				
Receptor	Study description including question and/or objective (several can be listed per receptor)	Design and methods (brief description)	Results (brief description)	Status (planned, underway, completed, with dates)
Physical environment				
Benthos				
Fish and fisheries				
Large vertebrates				
Birds				
Marine uses / users				
Other* (can be named)				
Reports or Papers	(Key papers on the areas addressed should be listed here; when possible the files themselves can be made available in downloadable PDF format, alternatively links to the files or project website can be provided when available e.g. SeaGen.)			
Research Projects	(past or on-going environmental research projects at the site)			

Monitoring and adaptive management: Oceanlinx MK1

General description

Receptor	Monitoring program description including question and/or objective (several can be listed per receptor)	Design and methods (brief description)	Results (brief description)	Status (planned, underway, completed, with dates)
Physical Environment	Water and sediment quality	N/A	Was not affected by the installation of the device.	N/A
	Coastal processes (sediment fluxes, waves and tidal currents)	N/A	No perceptible effect as the site is a low energy environment (10kW/m) and the device is positioned in front of the breakwater.	N/A
	Onshore physical environment	N/A	Onshore physical environment consists of several breakwaters surrounding a large industrial site.	N/A
Biological Environment	Impact on designated sites	N/A	No designated sites in the area.	N/A
	Marine ecology	N/A	Low fish and fauna count on seabed, increasing amongst blocks that form breakwater.	N/A
	Fish	N/A	Low fish and fauna count on seabed, increasing amongst blocks that form breakwater.	N/A
	Electromagnetic fields	N/A	N/A	N/A
	Marine mammals	N/A	Low fish and fauna count on seabed, increasing amongst blocks that form breakwater.	N/A
	Onshore and	N/A	The site is on the edge	N/A

	intertidal ecology		of a large industrial port, N/A.	
	Birds	N/A	The site is on the edge of a large industrial port, N/A.	N/A
Human Environment	Landscape and seascape	N/A	The site is on the edge of a large industrial port, N/A.	N/A
	Archaeology and cultural heritage	N/A	It was determined that there was no effect on archaeology and cultural heritage.	N/A
	Socio-economics	N/A	As a test platform this was N/A.	N/A
	Noise	N/A	Acoustic tests determined that there were low noise levels with no predominant tone. Positioned in front of a large industrial port with a Coal hopper in the background, so the device was located in an existing high acoustic industrial environment.	N/A
	Commercial fisheries	N/A	No commercial fishing in the area, some coastal angling from the adjacent breakwater.	N/A
	Navigation: detailed navigation risk assessment	N/A	The device sits on the seabed very close to the breakwater and in relatively shallow water, it was deemed that there would be no risk to local navigation.	N/A
Reports or Papers	N/A			
Research Projects	N/A			