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Barrier to protect inlet from eel grass, debris, fish & oil (ref 1003)

A power station needed to protect it's main cooling water inlets from floating eel grass, debris, fish and oil spill from within surrounding waters. Vikoma provided a fixed floating barrier using a neoprene sentinel oil boom in conjunction with an existing sonic fish deterrent. The boom was positioned to capture floating debris and eel grass on either side which enabled easy collection using a boat and preventing debris contaminating the production process.

Background information

Scenario	Power station with main cooling water intakes
Problem	Floating eel grass, debris and fish were getting drawn into the water intakes and a solution was needed to prevent contamination.

Solution

Vikoma installed a foam filled oil containment boom. Sentinel 750 made from neoprene was selected, due to the durability and long life offered by the material. As well as acting as a barrier for oil, the boom is ideally suited to stopping floating debris with it's 350mm freeboard foam floatation. The boom also has a skirt 400mm below the water, which stops anything just below the water line. The boom was tethered to a fixed buoy to keep it in position at the head of the structure. Two stainless steel slider systems were installed adjacent to the water intakes to allow the boom structure to move up and down with the rise and fall of the tide. To the left side of the system, a quick release gate was incorporated to allow access for water intake maintenance.

Customer objective	Feedback/Solution
Barrier needed to protect intakes from oil spills	A sentinel oil boom was fixed to a mooring buoy, protecting the inlets
Barrier needs to protect from debris and eel grass	With a 350mm freeboard foam floatation and 400mm below the waterline, debris and eel grass does not pass the barrier
Barrier needs to move with the tides	Strainless steel slider system incorporates
Durable solution needed	The boom was manufactured from strong, durable neoprene

Optional extras

A silt curtain skirt could be added to the boom which would also protect the water inlets from algae and silt.

Below: Attached to stainless steel sliders and a fixed buoy, Vikoma's boom protects the water inlets

Right: Debris and eel grass being collected to the right of the boom, ready for removal.