

# Innovation in Mooring Design

AI are currently developing a new mooring system for circular cages in order to support the installation of their Waste Capture System (WCS). This mooring system offers significant advantages over traditional mooring grids even for sites where our WCS is not being used.

The new design eliminates the need for conventional grids and side anchors by utilising the benefits of heavy ground chain and spar buoys. Typical chain or rope bridles connect the top of the spar buoy to the cage and the bottom of the spar buoy to the waste capture frame. The vertical tension between spar buoy and ground chain allows the horizontal movement of cage and waste capture frame to be controlled within pre-determined limits.

Aqua innovations mooring design for circular cages will have profound implications for aquaculture and has inspired further innovation in both installation techniques and on site monitoring of equipment.

The benefits will include:

- Compared to a conventional grid, the new design requires only 10% of the seabed area.
- The system utilises self-installing piled or suction anchors, lighter, more efficient, accurately fixed in position by any workboat.
- No subsea grid of ropes / side anchors, reduced footprint, less drag from marine growth, no maintenance, extended life cycle.
- The mooring loads are distributed evenly throughout the whole system.
- Grid spacing significantly reduced by using spar buoys as berthing face for well boats.
- With no subsea grid, individual cages can be removed / replaced or connected to facilitate swim-throughs or treatments.
- Load cells transmit the mooring loads from cages / waste capture system to the feed barge, providing valuable data for both mooring design and the condition of nets and equipment.
- All connections from buoy to cage / waste capture frame controlled from the surface.

**For more information on this system please get in touch.**

