

## ITCHENOR SALTMARSH TRIALS 2023

In order to understand the technical and practical abilities of a new drag box system in the scope of saltmarsh regeneration, Land & Water along with Earth Change partnered with Chichester Harbour Conservancy to carry out trials within the harbour.

Barges arrived at high tide containing silt from the harbour dredging works, and deposited 300m<sup>3</sup> of silt at the site of an anchored pontoon. The pontoon had a sliding rail system to which the return pulley for the drag box was attached. The other end of the pulley was attached to a long reach excavator up on the saltmarsh/foreshore.

The drag box is then winched back and forth and is designed to operate to capture and release material at each end of the process. An amphibious (low ground pressure) long reach excavator capable of working in this specialist environment was also used to then spread the material to provide saltmarsh coverage in accordance with the design scope using GPS positioning.

The drag box was originally used with steam engines but has been redesigned by Land & Water to use a hydraulic winch from the Canadian Forestry Sector that fits into a 28t excavator as an attachment. Depending on the density of the silt, the drag box can move between 5-10 m<sup>3</sup> of silt at a time and on this project moved in excess of 300 m<sup>3</sup> in a 5 hour low tide window (60m<sup>3</sup> p/h) over a distance of 150m across the foreshore.



### Project Particulars

Client: Earthchange  
February - March 2023



**PROJECT**  
**VALUE:** £260,000