

Dredged Materials Management

The use of port and waterway maintenance dredging material for land reclamation is common practice around the world. The recovered sediments are composed of organic material, clays, silt, sand and gravel of varying degrees, with this assemblage dictating the overall consolidation rate once placed. Post dredging, and often after waiting many years for the profile to solar dry, sand is slowly applied mechanically as a pre-load in sufficient quantities to then form a firm foundation. Due to the uncertain strength of the deposited dredge material some of this sand is then lost at depth in this strengthening process.

Phibion's Accelerated Mechanical Consolidation Process (AMC) has been successfully applied to dredging operations to both reduce the volume of dredged materials and the development of strong, stable foundations.



AMC operations in dredged materials

When applied to fine dredged materials, AMC (+ some additional post treatment controls) can deliver:

- Rapid consolidation to very high density within 7 – 12 weeks;
- Reduction in deposited volumes of up to 30%;
- A trafficable surface with strengths at depth of up to 35 kPa; and
- Option for hydraulic sand placement with zero sand loss representing a financial saving and preservation of precious sand resources.



Hydraulic sand placement on AMC managed dredged materials

Phibion can provide AMC services to your organisation. We will provide the customised MudMaster®, provide experienced operators, manage all maintenance/sparing and monitor performance. Additionally, we can provide supporting works, strategic planning and reporting.

Our services will maximise your performance with no capital expenditure and none of the operational/financial risks of conventional management. This approach is safe, infinitely scalable and can be sustained under all conditions.

Phibion can deliver this performance at a fraction of the cost of other potential alternatives and allow your operation to realise its potential today, without compromising the future.

Munro, L. D. and Smirk D.D., 2015. "Mud Farming of Dredge Impoundments". PIANC, 2015, October 20-22, Savannah, U.S.A.