ROYAL SMALS

Benefits of hydraulically dredged sediment on farmland

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Royal Smals offers a circular and sustainable solution for the maintenance of navigation channels, lakes and canals nearby farmland by the reuse of hydraulically “won” sediments

Specialist dredging with numerous benefits

- Nutrient rich sediment can enrich the farmland
- Sediment can increase the ground level which will reduce the risk of flooding in the future
- The hydraulic removal of the sediments by pipeline transportation and pumps towards the dewatering lagoon results in a low impact for environment due to a high reduction of noise, fewer road traffic and lower CO_2 output

Under which circumstances will this be a viable proposition?

- Specific watercourses and channels which have to be cleaned or deepened for good conveyance
- As a precaution in times of heavy rainfall and for transportation of goods over the water
- In regions where watercourses are hardly accessible from the quay/waterfront with excavators or backhoes
- Watercourses which are clogged overtime with mainly organic sediments
- If deepening of the watercourse to a new required level is required

Our specific equipment

- Highly flexible, fully demountable and road transportable cutter suction dredgers
- Dredgers if needed in variable sizes from 4 up to 12 inch for all scopes
- All dimensions of dredging pipes, floatable and land
- Low noise, low turbidity, low impact on eco-live
- Additional equipment like workboats, boosters and barges
- 137 years of experience within a royal company to execute all projects

10-inch cutter suction dredger Phantom dredging an English navigation channel

The Royal Smals proposition

01 First step is to find a suitable dewatering location for the dredged up sediment. This location for constructing the dewatering lagoon with ground bunds is preferably located close to the watercourse, so that the drainage water can easily return to the watercourse. If the dewatering area is located on a further distance, drain water pipeline including pump (booster) can to be installed.

02 The pre-study will provide the needed background information about soil and water as part of the preparation (usually this is the client's responsibility). Additional samples of the sediment will be analysed in our laboratory to examine the composition.

03 Excessive vegetation from the watercourse will be removed (carried out by a harvester) prior to the work execution.

04 After transportation by road, the hydraulic cutter suction dredger with sufficient pipelines will be brought to a suitable assembly location.

> **"Pumping distances up to 9,000 metres are no problem with our dredging expertise and equipment**

05 Using the hydraulic cutter suction dredger, the sediment is collected from the bottom of the watercourse. Then, it will be transported by pipeline to the measure work constructed lagoon, were the sediment will fill up the dewatering lagoon.

06 Within the dewatering lagoon the sediment is separated by gravity from the water and the clear water will run back to the watercourse / navigation channel.

07 In the above-mentioned case, we call sediment applicable; it can be spread nearby the watercourse. In case of contaminated sediment (not applicable, never applicable) the sediment cannot be spread over farmland and we will advise other suitable solutions.

Are you looking for a circular and sustainable solution to meet your specific requirements?

> We would be happy to visit you on site to discuss the best possible approach, please contact us

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