

# Analytical Solutions for MARINE SEDIMENTS

The James Hutton Institute is a respected, globally recognised research organisation. Scientists at the James Hutton Institute follow the inspiration of James Hutton, whose observations on Scotland's rock, soils, agriculture and landscapes forever changed the way we think about the world.

Making an impact through science, James Hutton Limited draws on the scientific expertise, intellectual property, facilities and resources of the James Hutton Institute to offer a comprehensive range of analytical, research and development, crop science and scientific project services.



## THE CONTAMINATION OF MARINE SEDIMENT IS A MAJOR ENVIRONMENTAL ISSUE.

A large variety of contaminants from marine and industrial sources are associated with sediment contamination, including heavy metals and persistent organics (e.g. PAH's and PCBs).

To control potential contamination in Scotland, many activities require prior marine license consent from the **Marine Scotland, Licensing Operations Team (MS-LOT)**.

These include:

- Dredging of the sea bed
- Construction, alteration or improvement works
- Deposit of substances or objects into the sea or onto the sea bed
- Removal of substances or objects from the sea bed

## DREDGED MATERIAL

Maintenance and construction in harbours and rivers requires the removal of sediments by dredging and the subsequent disposal of the dredged material. Prior to licencing and disposal, material must be analysed for contaminants.

## HARBOUR/OPEN SEA CONSTRUCTION

Prior to the disturbance of soil or sediment, analysis must be undertaken to determine levels of contamination within this material and the potential impact this could have on surrounding water, construction materials and landfill.

**IF YOU ARE CONSIDERING WORK SUCH AS HARBOUR CONSTRUCTION OR ENLARGEMENT, FLOOD DEFENCE SYSTEMS, CONSTRUCTION OF NEW BUILDINGS, YOU WILL REQUIRE AN MS-LOT LICENCE.**

**JAMES HUTTON LIMITED CAN HELP.**

## SAMPLING & ANALYSIS PLAN

### Our in-house statisticians can:

- Create an accurate chart of the dredge area and sample locations
- Provide details of sample types and suggested sampling methodology
- Recommend the number of samples to be taken

## ASSESSMENT OF MATERIAL

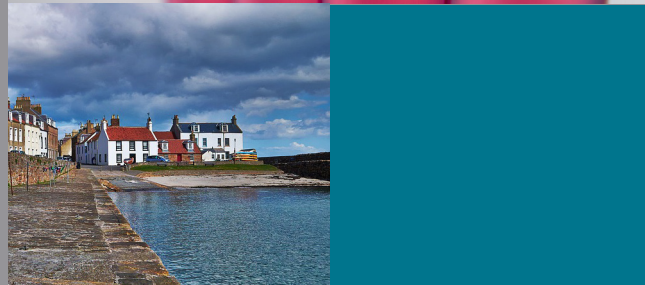
### A thorough investigation by expert soil analysts:

Assess results against Marine Scotland action levels (AL1 & AL2)

## MONITORING & REPORTING

### Support from globally respected scientists:

- Complete in-dredge and post dredge monitoring as required by licence
- Provide reports of monitoring to MS-LOT
- Submit returns detailing amounts dredged to MS-LOT



The analytical solutions provided by James Hutton Limited are unique to each customer, based on their specific requirements. We take pride in being world-leading experts, integrating techniques to find the solutions that businesses need; quickly, independently and with unrivalled accuracy.

**To find out more, please contact us in complete confidence.**