

Playing a key role in the **Falmouth Marina improvements** and restoration of the old China Clay pits

From Quandary to Quarry



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4R Environmental Consultants, part of the 4R Group, has applied innovative solutions to resource management problems during a major expansion and redevelopment at Premier Falmouth Marina, Cornwall.

This was part of a wider cost-effective and environmentally beneficial solution to treat and recycle contaminated dredgings which unlocked this £1.5 million redevelopment scheme.

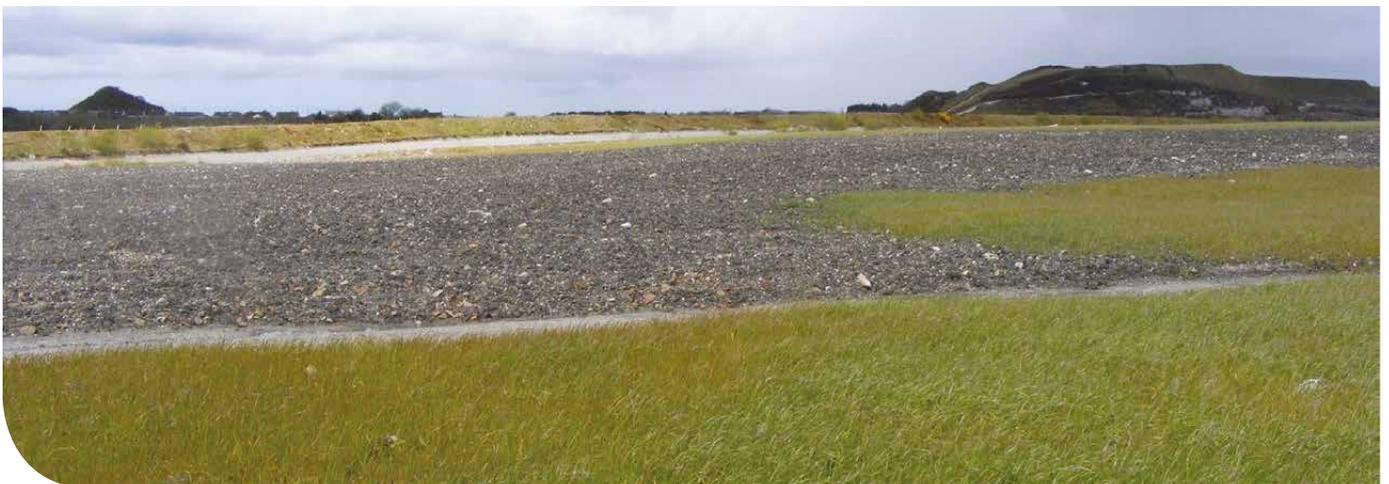
Our technical team, which includes some of the UK's most experienced soil scientists, was brought in to assess the quality and potential land recycling options for the dredgings, based on in-situ core samples taken from the Marina. Analysis demonstrated that the dredgings

had low levels of metals and good soil properties making them an ideal material for restoring local china clay quarries.

This extensive piece of work required us to hold wide-ranging consultations with a number of government departments including the Environment Agency, Natural England, Marine and Fisheries Authority. This was in respect to the potential for Tributyl Tin, a historic component of marine paints often found to be present in marine

dredgings, and the potential effects of this compound in the terrestrial environment.

4R Environmental Consultants, with our knowledge and expertise in assessing the risks of organic compound contaminants in soil and water, ensured that safe recycling of the marine dredgings could be demonstrated. As a result, the required agreements to use the dredged material for soil creation were authorised by the Environment Agency.



See over for further details →

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Working alongside a specialist dredging contractor to manage the 32,000+ tonnes of contaminated sediment from the Falmouth Marina, we demonstrated our ability to recycle difficult waste materials into valuable products through specialist knowledge and practical solutions.

Pete Bradshaw, Managing Director of Premier Marinas said: **“We just knew there had to be a better solution than landfill – and anyway, landfill tax would have meant that the project was not viable. 4R Environmental Consultants was able to find a better solution, both environmentally and economically. The project has meant that we have in some small way contributed toward the restoration of the old China Clay sites.”**

As well as the initial consultancy, 4R Group was also responsible for transportation throughout the project - from the marina, to the recycling of the dredgings for use in restoring local china clay quarries.

Dr Paul Gibbs, Director of Consultancy for 4R Environmental Consultants, says, **“We were delighted to be able to provide such a beneficial solution which helped both the local marine and land environments and closed the recycling loop by making good use of a material that would otherwise have ended up in landfill.”**



The whole dredging project increased the size and capability of Falmouth Marina providing wider employment and tourism benefits in the South West region, whilst the recycling of the product assisted in the restoration of old China Clay sites creating natural flora and fauna on previously barren sites.



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