

Geophysical Research Abstracts,
Vol. 10, EGU2008-A-09719, 2008
SRef-ID: 1607-7962/gra/EGU2008-A-09719
EGU General Assembly 2008
© Author(s) 2008



The sustainable reuse of dredge material in Ireland

C. Sheehan(1), J. Harrington(2)

(1) Department of Civil, Structural & Environmental Engineering,

(2) School of Building & Civil Engineering

Cork Institute of Technology,

Bishopstown,

Cork, Ireland.

Tel: +353 21 4326313; Fax: +353 21 4345244

colm.sheehan@cit.ie

joe.harrington@cit.ie

Ireland generates approximately 1.2 million wet tonnes of dredge material annually from maintenance projects and capital dredging amounts have varied widely on an annual basis in recent years from as little as 200,000 wet tonnes to over 2 million wet tonnes. An analysis of dredging in Ireland by Harrington et al. (2004) identified the restricted practice of beneficially reusing dredge material, primarily for the fine grained fraction.

This paper presents current work investigating the potential implementation of new dredge material recovery and reuse technologies in an Irish context. Techniques for dredge material recovery and reuse are reviewed and appropriate technologies for Ireland are identified. Dredge material volumes generated in Ireland over the next decade are estimated and quantified. These estimates include, where appropriate, both maintenance and capital dredging projects. The data generated from a survey of dredging projects in Ireland is presented. This data includes a classification by dredge material size, equipment utilised and by the method of dredge material disposal or reuse.

Four dredging sites where either maintenance dredging is undertaken or capital dredging is planned were chosen and for each a suitable potential beneficial reuse of dredge material was identified - Bantry Bay (land improvement post treatment), Fenit Harbour (coastal protection utilising geotubes), Cork Harbour (habitat restoration) and Waterford Harbour (topsoil manufacture). At each site a sediment sampling and testing programme has been completed and technical, environmental and economic analyses for the proposed beneficial end uses have been undertaken.