6.0 Assessing the environmental impact of anchoring cruise liners in Falmouth bay

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Abstract

Ports are coming under increasing pressure to manage their operations in an environmentally sustainable manner. This pressure comes from legal requirements, national agencies, planning inquiries and local activists (Wooldridge et al 1999). Ports have tended to react to such demands by making environmental policies and audits, always playing catch-up to the latest problem. An alternative approach is to be pro-active in seeking out environmental concerns at an early stage, assessing the scientific evidence of harm in the context of the specific port, and taking mitigating action according to the evidence. This is the basis of a Knowledge Transfer Partnership between the University of Plymouth and Falmouth Harbour Commissioners (FHC), who run a small trust port in South West England. The Port of Falmouth enjoys over thirty cruise calls a year. Smaller cruise liners can berth within the docks, but larger ships must anchor in Falmouth Bay, a Marine Special Area of Conservation, and tender their passengers ashore. Anchoring directly affects the benthic habitat through smothering, abrasion and disturbance. The noise and visual intrusion of vessels create an indirect impact. Studies into anchoring activities in fragile habitats such as eelgrass beds have led to the strict management of anchoring (Milazzo et al 2002). Falmouth Bay has a rare dead maerl habitat. This paper presents the on-going study, which is assessing the potential environmental impacts of anchoring in the Falmouth bay area. The steps include synthesising existing data on the nature of the seabed, recording actual anchor locations within the bay to identify areas of high anchoring density and identifying the threat that anchoring poses to the species in the maerl habitat. It is known that there are bivalves that live below the surface, so comparative core samples will be air lifted from high and low anchoring density areas.
6.1 Introduction

Ports are coming under increasing pressure to manage their operations in an environmentally sustainable manner. This pressure comes from legal requirements, national agencies, planning inquiries and local activists (Wooldridge et al 1999). This exploratory case presents a methodology, based on a study currently in progress, for assessing the environmental impact of anchoring cruise liners at a particular port. As the paper will demonstrate, the actual environmental impact (as distinct from the presumed harm), will be different for each port. It varies with the nature of the seabed, with the importance and with the fragility of the underwater habitat in the anchored area. All of these factors can generally be assessed from existing data, but the data need to be drawn together in a systematic manner. The study applies a systems approach to maritime operations that is more fully reported in Dinwoodie et al (2010).

6.2 The Port of Falmouth

The port of Falmouth is in Cornwall on the South West peninsula of England. It is an Area of Outstanding Natural Beauty (AONB) and the Fal estuary and bay is a Special Area of Conservation (SAC) under the EU Habitats Directive. The harbour is said to be the third largest in the world. Falmouth itself is a town of great charm and interest. It is not only strategically placed for various cruise itineraries, but also surrounded by towns, gardens, great houses and world-renowned heritage sites that make ideal excursions from the town. It is marketed as a cruise destination via the marketing partnership of Destination South West (2010). Falmouth received 32 calls by cruise ships in 2009 (Falmouth Harbour Commissioners 2010).

Falmouth Harbour Commissioners (FHC) is the statutory port authority responsible for the regulation of much of Falmouth Harbour and Falmouth Bay. FHC operate within a demanding framework of national and EU legislation to ensure the economic and environmental sustainability of the port. Like many other ports around the world, they are active in addressing the need for commercial change, such as the joint proposal for a Cruise Terminal with the Falmouth Docks & Engineering Co. Ltd (FDEC), whilst tending only to react to environmental drivers. This leads to a situation where the port is often left reacting to an environmental initiative instead of engaging and adding value to the initiative from its conception. The designation of the port area as a SAC in 1998 made the constraints exceptionally severe, as these are strictly protected sites (McLeod et al 2005). In 2008, FHC decided to take a new approach. They would take the initiative by seeking out environmental concerns at an early stage, assessing the scientific evidence (and if necessary commissioning new research), and then take mitigating action as required, based on the evidence. The port is seeking to work in partnership with the statutory environmental bodies such as Natural England. Such an ambition would normally be beyond the resources of a