# SITE SYNOPSIS

**Site Name: Porcupine Bank Canyon SAC**

**Site Code: 003001**

Porcupine Bank Canyon lies at the continental margin of the north-east Atlantic and slopes into the Rockall Trough (to the west) and Porcupine Seabight (to the east). The site is, at its maximum, approximately 48 km long and 29 km wide and lies approximately 490 km west of Co. Kerry. An existing SAC (South-West Porcupine Bank) bounds a branch of a submarine canyon that is part of a series of canyon systems incising the edge of this bank. Circulation patterns around the banks along the Irish margin cause the accumulation of nutrient rich waters on the tops of banks leading to high surface productivity which provide enriched food sources to the ecosystems occurring at the bank, e.g. canyons and carbonate mounds.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

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| [1170] Reefs |
| [1349] Bottlenose Dolphin (*Tursiops truncatus*) |

The Porcupine Bank was mapped during the Irish National Seabed Survey in 2000 by the R.V. *Bligh*. The multibeam echo-sounder data reveals in exceptional detail the terrain features of the canyon at this site. At approximately 55 km long and approximately 15 km wide it is the largest submarine canyon off the Porcupine Bank. It consists of a deep (up to 2,600 m) main canyon with several side-canyons or channels branching into the continental shelf at water depths of between 1,400 m and 800 m. The canyon widens seaward at the continental slope where the thalweg (the deepest continuous inline within a valley) occurs in 2,600 m water depth. During the recent offshore survey it was noted that the substrate of the northern-most transect was dominated by hard ground interspersed with small areas of soft sediment. The southern transect was initially characterized by soft sediment with occasional boulders and pebbles. Terraces, cliffs, overhangs and boulders were all noted. Dead coral also formed an element of the available habitats. These habitats conform to reefs according to the E.U. Habitats Directive and are mostly geogenic in origin.

The fauna was highly diverse, particularly amongst the dead coral framework, and included black coral, soft coral (>2 species, including *Anthomastus* sp.), sea pen (*Pennatula* sp., on soft ground), gorgonians, encrusting sponges, desmospongia, glass sponges (particularly *Aphrocallistes* sp.), sea urchins (mainly *Cidaris cidaris*), anemones (including *Phelliactis* sp.), starfish, hydroids (stylasterids), fish, galatheids (>1 species and including *Chirostylus* sp. and Munidae), echiurans (particularly abundant on softer sediment), un-stalked crinoids, stalked crinoids, crabs

(*Bathynectes* sp. and *Chaecon* sp.), corallimorphs, britle stars and sea cucumbers. Also present on the framework were anemones, various tubed worms, mobile crinoids, glass and desmosponges, asteroids, *Anthomastus* sp., *Cidaris cidaris*, fish, shrimp and squid. Dead coral and coral rubble was noted widely in the area.

The site is of conservation importance for reefs, a habitat that is listed on Annex I of the E.U. Habitats Directive.