## CENTRE FOR MARINE AND COASTAL STUDIES Ltd TERRY HOLT

Present Position:	Senior Consultant
Date of Birth:	10 February 1959
Nationality:	British
Profession:	Marine Environmental Consultant
Qualifications etc:	B.Sc. Honours Marine Biology 1980 Ph.D. Marine Biology 1984 Scientific Diver (HSE Part IV) Marine Mammal Observer course ENG 1 seafarers medical in date Offshore survival BOSIET course in date.

## PROFESSIONAL HISTORY

2003-present	Director, CMACS Ltd. Dr Holt is responsible for the co-ordination and management of coastal and marine projects within CMACS Ltd. He is a specialist in marine ecology with particular expertise in benthic ecology including biogenic reef features, and especially with reference to a variety of human impacts. His main areas of work include environmental assessments, environmental monitoring programmes, MSC assessments, aquaculture projects (including algae), and conservation strategy. He is based at Port Erin in the Isle of Man.
1998 - 2003	Senior Environmental Consultant, Centre for Marine and Coastal Studies (CMACS), University of Liverpool. Co-ordination and management of coastal and marine projects within CMACS (part of ERC, Environmental Research and Consultancy, an environmental assessment arm of the University of Liverpool). Also carried out occasional teaching duties re honours and PhD marine biology course.
1991-1998	Environmental Consultant, Port Erin Marine Laboratory. Projects included environmental assessments, environmental monitoring programmes, assessment of the sensitivity of marine communities, and marketing and feasibility studies in relation to commercial seaweed activities. Also carried out some teaching duties re honours and PhD marine biology course.
1986-1996	Director, Kelp Farm Ltd, Mariculture company. Involved in all technical and commercial aspects of farming, processing and selling seaweeds for food, mainly based in the Isle of Man but also one year in the west of Scotland.
1992-1993	Part-time lecturer at Port Erin Marine Laboratory, Liverpool University, Port Erin, Isle of Man.
1985-1986	Nature Conservancy Council. Phase I botanical surveys of the Yorkshire Dales National Park.
1984-1985	Scarborough Borough Council. Botanical surveys and public interpretation, Yorkshire coast.

## **KEY EXPERIENCE** The following detail key areas of Dr Holt's experience and expertise:

*Sustainable fisheries assessment*. Dr Holt has been involved in assessments of fisheries (usually sub-contracted to Moody Marine) to the Marine Stewardship Council (MSC) standards for sustainable and well managed fisheries from 2001 until the present. Has been involved in pre-assessments, annual re-assessments and full assessments of mollusc and finfish fisheries in UK, the sub-Antarctic, Vietnam, Denmark, the Faeroe Islands and the Isle of Man, and peer review of mollusc fisheries in Canada and the Netherlands. Contributed to development of generic scoring guidelines for the MSC and took part in a workshop aimed at refining assessment methods. Carried out preliminary assessment of a number of U.S. aquarium fish wholesalers and retailers against sustainability standards on behalf of MAC (Marine Aquarium Council) in order to investigate appropriateness of draft standards. Has also carried out assessments of fishing vessels/crew under the Sea Fish Industry Authority's Responsible Fishing Scheme.

*Other fisheries / aquaculture related activities* Installed mussel cultivation systems into disused docks as part of remediation programmes; worked with mussel and scallop culture systems to investigate potential for multi-species culture; acted as expert assessor to advise Inspector in a public enquiry re possible effects of marine development on mussel cultivation; carried out surveys before and after pipeline and cable laying to determine effects on commercial stocks of whelks, scallops, crabs and lobsters; carried out assessments of commercial fisheries concerns for numerous projects. Have used sidescan sonar to collect evidence of illegal dredging within a no fishing area. Co--supervised a PhD on effects of pollution on a former salmon stream.

*Marine conservation strategy*. Preparation of reports for UK Conservation Agencies on the sensitivities of specific marine communities, particularly biogenic reefs (edible mussels; horse mussels; sabellarid and other worm reefs) to human activities, heavily involved in drafting of biodiversity action plans for UK and Isle of Man, notably on mussel dominated communities, and production of summaries of marine biological information for specific geographical areas; contributed to meetings to set up management strategy for first Isle of Man marine nature reserve in Ramsey Bay.

Baseline survey, monitoring and assessment of environmental impacts particularly on benthic systems. Experience in the Irish Sea (Centrica, Npower, Dong Energy, Hamilton Oil, BHP Ltd, BP Ltd, Shell, British Gas, Marathon Oil, Esso Exploration and Production, Burlington Resources, Elf Enterprise Caledonia ltd, Lasmo, Harland and Wolf, National Windpower, Seascape), Ireland (Harland and Wolf, Renewable Energy Systems, Hydrosurveys/GEC), North Sea (PowerGen; Farm Energy; E.On; GGOWL, SSE/BOWL, Dong Energy), Eastern Atlantic, south east Mediterranean and Egyptian Red Sea (British Gas, Zaafco), plus numerous similar surveys in relation to various activities including offshore windfarms, oil and gas exploratory drilling, major sewage disposal schemes, pipelines and seabed cables, marine current turbines and offshore radio platforms, and aggregate extraction. Includes considerable experience at sea with a wide variety of survey, sampling and fishing gears including Day grabs, Van Veen grabs, beam and otter trawls, SPI, video and sidescan sonar. Experienced in intertidal surveys at a variety of levels, including use of GIS and aerial photography. Have spent time at sea on a wide variety of research, diving,

fishing and fisheries protection vessels. Have attended Marine Mammal Observer (MMO) course and have experience of MM surveys in Irish Sea.

*Multi-disciplinary project management*. Spent 30 months co-ordinating and carrying out environmental assessments and surveys for the Isle of Man's allisland sewage treatment programme, covering marine & freshwater ecology and water quality, terrestrial ecology, public health, and cultural heritage, plus input to public enquiry. Increasing numbers of more recent baseline surveys and assessment are multidisciplinary.

*Commercial fishery activities.* Over ten years experience as fishery/mariculture manager, involving mainly algal cultivation and management, with some involvement in scallop cultivation and management, including four years as director of a company farming seaweeds in the Irish Sea and selling into the U.K. food market. Included research, pilot scale and commercial scale seaweed cultivation operations, and covered general management roles.

Advisor on technical, environmental and commercial viability of proposals for seaweed utilization and cultivation in Maldives, Madagascar, Ireland, Helgoland, Kiribati, Oman and Isle of Man.

Has also lectured on commercial aspects of seaweeds at University of Liverpool (Marine Biology Honours); taught on a one week residential course on seaweed cultivation in Gran Canaria, Spain; co-authored a chapter of a book on "Seaweed Resources of the World".