



# **Marine Conservation Zone Reference Areas:**

*Guidance document for regional MCZ  
projects*

**Version 1.1**

## Version Control

<b>Version and date</b>	<b>Amendments made</b>	<b>Issued to and date</b>
Version 1.0 (30 September 2010)		Natural England / JNCC / regional MCZ projects internal review (30 September 2010)
Version 1.1 (14 October 2010)	Text, tables in line with reviewers comments	Natural England / JNCC / regional MCZ projects internal review (14 October 2010)

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This guidance is provided by JNCC and Natural England at the request of the regional MCZ projects. The regional stakeholder groups should use this guidance when identifying reference areas in their respective project areas.

**‘Each broad-scale habitat type and FOCI should have at least one viable reference area within each of the four regional MCZ project areas where all extraction, deposition or human-derived disturbance is removed or prevented.’**

Reference areas provide a key opportunity to demonstrate the unimpacted state of a broad range of marine features, in the context of prevailing environmental conditions. For reference areas to be an effective control against which it is possible to assess the effects of pressure, the human activities within them need to be managed so that impacts are minimised at the site. Definitions also cover activities that occur outside of the reference area, but which may impact upon the feature(s) within. This means that they will be areas where all extractive, depositional and/or disturbing and damaging activities are excluded.

This document provides further definitions of the terms used, and guidance on what activities will be restricted, or require mitigation, within the Marine Conservation Zone (MCZ) reference areas. Full text, rationale, literature review and referencing associated with the activity restrictions was produced by York University on behalf of the Countryside Council for Wales (CCW), who used it to determine activity restrictions in the Welsh Highly Protected Marine Conservation Zone (HPMCZ) programme. This current guidance is extracted from CCW’s work for use in the English territorial waters and UK offshore waters adjacent to England MCZ programme.

### **1) Definitions of terms**

To manage reference areas effectively, it is important to clarify which activities are **extractive** and **depositional**, as well as activities that induce unacceptable levels of **damage** and **disturbance**. Some activities may have little impact upon wildlife or protected features at low intensity, but increase to unacceptable levels at higher intensities. These terms must be defined so regulations can be set out for activities within reference areas that are clear to all users of the protected areas.

*Extractive activities* are acts that involve the temporary or permanent removal, by intentional or unintentional means, of any living organisms or non-living materials or natural features from the marine environment.

*Depositional activities* are acts that involve the intentional or unintentional laying down, movement or discharge of living or non-living materials or substances into the marine environment. This includes deposition of materials such as rocks, gravel or sand, building of structures, and release of any polluting or toxic or chemical substances, as well as discharge of ballast, untreated human waste, biodegradable and industrial waste and the discard of fish offal and by-catch.

*Damaging activities* are intentional or unintentional acts that potentially result in permanent or temporary physical harm or injury to species, or cause permanent or temporary alteration to natural features within the marine environment. Physical

damage would count as something which reduced an individual of a species' ability to operate in a natural manner or caused impact to the wider marine environment through the alteration or loss of populations or natural features. For example, frequent access by visitors to intertidal sites could be considered damaging if the persistence of intertidal populations was reduced or altered by the effects of trampling.

*Disturbing activities* are intentional or unintentional acts that interfere directly or indirectly with the normal functioning of populations beyond the natural variability of the ecosystem. Disturbing activities may result in distress to a population or longer-term deterioration in a population's fitness (e.g. ability to feed or reproduce successfully). This may then impact upon future abundance, reproduction or distribution of protected populations.

## **2) Activities and restrictions**

Activities considered either depositional or extractive **would not** be permitted in reference areas (Table 1).

The majority of potentially damaging or disturbing activities would be able to be conducted within reference areas without unacceptable levels of damage if measures are put in place to manage these activities (Table 2). Examples include wildlife observation and scuba diving. Both activities have the potential to damage or disturb wildlife. Wildlife observation may disturb animals feeding or resting at the surface by boats approaching too close or at speed, whilst the noise of vessels may disrupt communication between individuals. Scuba divers can damage sensitive habitats through bad finning practises or uncontrolled buoyancy. Options for controlling these activities to minimise any harm include codes of conduct and permits to limit the number of people able to engage in the activity within a site. Activities may also be regulated on a seasonal basis to minimise disturbance to breeding wildlife or those with young, for example, by motorised boating.

Table 1 lists activities considered extractive, depositional and potentially damaging or disturbing. Activities listed as **extractive** or **depositional** are considered **incompatible** with the definition of reference areas.

**Table 1**

<b>Extractive</b>	<b>Depositional</b>	<b>Potentially damaging or disturbing</b>
Aquaculture	Aquaculture	Anchoring/mooring
Beachcombing	Catch-and-release angling	Low flying aircraft
Catch-and-release angling	Commercial fishing	Maintenance and operation of existing structures
Collection of flora and fauna	Construction of structures	Motorised boating
Collection of natural materials/substrates	Deposition of gravel/rock	Navigation/transit of vessels
Commercial fishing	Disposal of dredge spoil	Non-motorised boating
Construction of structures	Military activities	Other recreational pursuits
Dredging	Petroleum/gas exploration	Personal water craft
Marine curio collection	Petroleum/gas operation	Point source discharges
Military activities	Recreational angling	Ports and harbours
Petroleum/gas exploration		Scientific research and education
Petroleum/gas operation		Scuba diving and snorkelling
Recreational angling		Swimming
		Vehicular access
		Visitor amenities/camping
		Walking/hiking
		Wildlife observation

Table 2 summarises many of the management issues relating to impacts from potentially damaging and disturbing activities (other than extractive and depositional activities) within reference areas it also lists possible management responses that can help mitigate the effects of potentially damaging and disturbing activities. This can reduce harm to acceptable levels, and hence enable the activities to take place. The final column identifies where appropriate mitigation is unlikely – these activities are therefore not currently considered compatible with reference areas.

<b>Activity</b>	<b>Examples of circumstances where activity may be disturbing or damaging</b>	<b>Possible mitigation</b>
Anchoring/mooring	Presence of sensitive habitats e.g. Zostera beds and biogenic reefs	Restrictions on anchoring, moorings, code of conduct
Low flying aircraft	Noise or visual disturbance to wildlife or visitors	Restrictions on low-flying activity
Maintenance and operation of existing structures	Mortality of seabirds during windfarm operation	Unlikely
	Removal of large decommissioned structures	Unlikely
	Disturbance to wildlife from electromagnetic fields	Deep burial of cables, no new cables once reference area in place
Motorised boating	Noise disturbance or physical impact on species such as cetaceans, seals	Seasonal closures, code of conduct, speed restrictions
	Noise disturbance or physical impact on wildlife with dependent young	Seasonal closures, code of conduct, speed restrictions
	Anchoring in sensitive habitat	Provision of moorings, zoning
Navigation/transit of vessels	Noise disturbance or physical impact on species such as cetaceans, seals	Appropriate speed restrictions
	Noise disturbance or physical impact on wildlife with dependent young	Appropriate speed restrictions
	Visual disturbance during wildlife breeding/feeding/resting times	Speed restrictions, restricted access

Activity	Examples of circumstances where activity may be disturbing or damaging	Possible mitigation
Non-motorised boating	Visual disturbance during wildlife breeding/feeding/resting times	Code of conduct, seasonal restrictions
Other recreational pursuits	Dog walking - disturbance to wildlife	Seasonal closures, code of conduct, zoning
	Dog walking - faeces	Must be removed, waste disposal facilities, zoning
	Horse riding - disturbance to wildlife	Seasonal closures, code of conduct, zoning
	Horse riding - disturbance to sensitive habitats	Restricted access, zoning
	Surfing/Kitesurfing/Windsurfing/Kayaking - disturbance to wildlife	Seasonal closures, code of conduct, zoning
	Surfing/Kitesurfing/Windsurfing - disturbance to sensitive habitats	Restricted access, zoning
Personal water craft	Visual disturbance during wildlife breeding/feeding/resting times	Spatial and Temporal restrictions
	Noise disturbance or physical impact on species such as cetaceans, seals	Unlikely
	Noise disturbance or physical impact on wildlife with dependent young	Unlikely
	Damage to sensitive habitats by scour/wash/propellers	Zoning
	Anchoring in sensitive habitat	Provision of moorings, zoning
Point source discharges	All circumstances	Unlikely - Treatment of effluent appropriate sensitivities of the habitats and species

<b>Activity</b>	<b>Examples of circumstances where activity may be disturbing or damaging</b>	<b>Possible mitigation</b>
Ports and harbours	Disturbance to sensitive habitats and species from shipping activity e.g. noise, visual disturbance and wash	Unlikely
	Release of chemicals into marine environment	Re-positioning of boat cleaning areas away from reference area, careful disposal of contaminants
Scientific research and education	Damage to sensitive habitats e.g. by trampling or use of towed sampling gear/grab sampling	Code of conduct
	Disturbance to sensitive species such as cetaceans, seals	Code of conduct
	High numbers of people	Code of conduct
	Extraction or removal of species for research	To be performed only under permit
Scuba diving and snorkelling	High numbers of divers/snorkellers - trampling/sediment stirring/abrasion	Permits to regulate numbers, code of conduct, zoning
	Low skill level of divers	Signs and leaflets to raise awareness located at shore access points or dive centres; specified areas for beginners, zoning
	Presence of sensitive wildlife or habitats	Seasonal closures, code of conduct
	High numbers of boats - anchoring, noise and visual disturbance	Permits to regulate numbers
Swimming	Trampling of sensitive intertidal populations	Demarcation of access points
	Disturbance to sensitive species such as cetaceans, seals	Code of conduct, zoning
Vehicular access	Sensitive populations/habitats in intertidal zone	Specified access routes
	Noise/disturbance during wildlife breeding/feeding/resting times	Unlikely - access should be restricted during these times



<b>Activity</b>	<b>Examples of circumstances where activity may be disturbing or damaging</b>	<b>Possible mitigation</b>
Visitor amenities/camping	Effects of construction works for visitor amenities	Minimal construction of facilities, placed away from reference area
	Increased waste or litter	Site facilities away from reference area, code of conduct in place, educational boards
Walking/hiking	Trampling of sensitive intertidal populations	Access restrictions
	Erosion of intertidal habitats	Well marked paths, code of conduct
Wildlife observation	High numbers of boats - noise and visual disturbance to wildlife populations	Permits to regulate numbers, code of conduct and accreditation schemes
	Noise/disturbance during wildlife (e.g. seals, cetaceans, birds) breeding/feeding/resting times	Code of conduct
	Harassment of wildlife	Code of conduct