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# Scoping Study into the Potential Impacts of Coasteering in Pembrokeshire

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Interim Report

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## 1.0 Introduction

### 1.1 Scope and purpose of this report

This scoping study has been commissioned by the National Trust to investigate the potential impacts of coasteering on the Pembrokeshire coast. The objectives are two fold as follows:

- To identify potential impacts with reference to relevant literature and the experience of conservation professionals in the field.
- To map the distribution of any potentially sensitive features identified in order to provide a reference for activity providers and conservation professionals engaged in the sustainable development of coasteering in Pembrokeshire.

The purpose of this interim report is to brief interested parties on progress made on the scoping study and to focus attention on areas where further work is required.

It is envisaged that the output from this study could be made available via a suitable host (such as the Recreational Audit Working Group) to aid outdoor activity providers in identifying consultees to approach prior to establishing new routes and to act as an aide memoire for all concerned when discussing appropriate sites and mitigation measures. It is hoped that the study will also be of use in discussions between conservation professionals and activity providers over appropriate codes of conduct and management actions through a suitable forum such as the Pembrokeshire Outdoor Charter Group.

### 1.2 The need for scoping

The Pembrokeshire Coast National Park is Britain's only coastal national park. The area is therefore highly protected for its landscape character and includes many areas with other conservation designations.

In recent years, the adventure recreation market in the Pembrokeshire Coast National Park has grown (South West Wales Coastal Recreation Audit, 2009). The National Park Management Plan notes that 'High user volumes at a particular time may turn a basically innocuous activity into a potential problem' (Pembrokeshire Coast National Park Authority [PCNPA], 2008; p78). The novel sport of coasteering (traversing the coast by a combination of climbing, scrambling, cliff jumping and swimming [British Coasteering Federation, 2010]) in particular has become very popular. Organised groups travel from as far afield as Cardiff (some 100 miles) to coasteer on the Pembrokeshire Coast (South West Wales Coastal Recreation Audit, 2009). This sport is promoted as an opportunity to discover areas of coast inaccessible by normal means, seek adventure and 'commune with nature' (Activity Pembrokeshire, 2010; Celtic Quest Coasteering, 2010; TYF, 2010). Consequently, activity providers seek more remote locations to ensure a high quality experience for their clients. However, other users of these areas may be seeking different experiences. Visitors to the Pembrokeshire Coast National Park value the sense of 'peace, tranquillity, silence and the wild and beautiful coast' (PCNPA, 2008; p9). There is anecdotal evidence that activity providers feel some sites are already at their carrying capacity for this sport and the quality of experience for their clients is being adversely affected (Luddington, 2008).

Furthermore, the nature of the sport takes groups of participants into previously undisturbed intertidal areas. There is potential for physical damage to the receiving environment and disturbance to faunal species utilising the resources of this area. The extent of any impacts are not fully understood, so a precautionary approach to

developing the environmental resource for adventure sports should be adopted. A scoping exercise provides a systematic means of identifying any potential impacts.

## 2.0 Literature Review

There is a paucity of published research into the possible impacts of coasteering on the environmental resource which supports it (Luddington, 2008; Tyler-Walters, 2005). Relevant literature is briefly discussed below.

### 2.1 Physical impacts

Tyler-Walters (2005) conducted a desktop study into any physical impacts on intertidal communities and highlighted the lack of data for wave exposed shores; most studies have been conducted in sheltered environments. Biotopes likely to be sensitive to the physical effects of coasteering (trampling, scuffing rocks and pulling on kelp holdfasts) were then identified. The identification of potential impacts is supported by Davenport & Davenport (2006), who assert that turning of boulders and simple walking in the intertidal zone causes degraded habitat stability and reduced biodiversity (as few as 10 tramples potentially reducing algal cover by 25%). Thomas (2007) finds similar trends of reduced % cover and number of specimens of *F vesiculosus* in coasteered sections of the coast at St Non's Bay – although this is a small scale study as part of an undergraduate dissertation. Ponsford (cited in Luddington, 2008) noted bare patches on barnacle covered rocky shores where coasteering occurs regularly.

### 2.2 Disturbance to wildlife

Lyles (2009) studied the activity of otters on the coast in the Pembrokeshire Marine SAC. Evidence was found that otters use the coast for feeding more extensively than previously thought. Marine fish constitute up to 56% of the diet of otters using coastal streams, possibly because such streams do not support large populations of fish. 62% of feeding dives occur within 20m of the shore. Coasteering and sea canoeing were singled out as the major potential threats for disturbance, but only if otters are using bays for lying up during the day. Lyles recommends establishing otter havens free from disturbance and the promotion of reporting schemes for otter sightings to further understanding of coastal otter behaviour (2009, p33).

There is no published research into coasteering with respect to the potential for disturbance to other faunal species which may be using the coastal strip. However, recreational impacts on cliff nesting birds and seals are well documented (eg Davenport & Davenport, 2006; Martinez-Abraín *et al.*, 2010), although these studies recommend further research in order to fully understand recreational impacts.

In order to minimise such potential disturbance, voluntary codes of conduct for other recreational activities in the coastal zone in Pembrokeshire are already in operation. For example the Marine Code (Pembrokeshire Outdoor Charter Group, undated a & b), Climbing Access Agreements for Pembrokeshire (PCNPA, 2009) and Personal Watercraft Guidelines (PCC/PCNPA, undated).

### 2.3 Perceptions of non-participants

Organised group activities may also impact on the quality of the visitor experience for non-participants. 93% of respondents to a 1994 survey of visitors to the National Park regarded 'peace and quiet' as significant to their experience (PCNPA, 2003; PCNPA, 2004).

Lynn & Brown (2003) comment that perceptions of the environmental impact of an activity often vary with education, gender and experience. Macnaghten (1995) observes that the attitudes of visitors are not fixed, but vary depending on the context in which they are placed. Different user groups seek different experiences and have a variety of motivations. Visitor satisfaction is correlated with motivation (Devesa *et al.*, 2010). It is only in understanding the spatial distribution of recreational conflicts and the drivers behind them, that land managers can develop appropriate techniques for optimising the visitor experience for all users in an area.

There is a distinction between the physical carrying capacity of a site and its perceptual carrying capacity, which is concerned with the subjective quality of the visitor experience (Urry, 1990). Crowding is a subjective concept based only in part on the density of people in an area. The Welsh Assembly Government (2008) recommends that a programme of work is developed to understand the impacts of different activities on the environment and evaluate the ecological and social carrying capacity of different coastal areas.

#### **2.4 Creation of informal access routes**

Luddington (2008) documents the creation of informal access paths and associated erosion due to this and other recreational activities on the south St David's coast. Records were made to provide a baseline for further study.

#### **2.5 Socio-economic impacts**

There is no literature available on the socio-economic impacts of coasteering in Pembrokeshire. However, tourism in general is a dominant factor in the Pembrokeshire economy (PCNPA, 2003; PCC/PCNPA, 2006). Adventure sports accounts for 8% of activities by visitors to the Welsh coast (Welsh Assembly Government, 2008). If planned properly, tourism can support rejuvenation of communities by bringing direct economic benefits to local businesses (Tribe *et al.*, 2000). However, there are less welcome impacts on the local economy. There is very marked seasonality in visitor numbers to Pembrokeshire, which may reflect the importance of family holidays, which are restricted to school holidays (PCNPA, 2003; Welsh Assembly Government, 2008). Seasonality of employment is of concern to local residents (PCNPA, 2004). Improvements in wetsuit technology and marketing by activity providers may provide one mechanism for extending the tourist season, reducing the problems of seasonality on the local economy.

### **3.0 Methodology**

Given the lack of research into the potential impacts of coasteering on natural features, any attempt to identify sensitive features or quantify potential impacts with any degree of certainty would involve new research. Such studies would be costly and time consuming. The approach in this report is not, therefore, to establish features and impacts through empirical study which will withstand the rigours of academic peer review, but to identify areas where impacts may occur and focus discussion between relevant parties. If consensus cannot be reached about the potential for impacts and mitigation measures to be employed, then further investigation into that area of discussion may be necessary.

Opinions will be sought from conservation professionals to identify features of potential sensitivity to coasteering (a list of features identified and consultees for each feature is given in Figure 1) and the distribution of these features will then be mapped. Interpretation of the data on all features to provide an estimate of the spatial

limits of any impacts is considered too onerous at this stage, although this would be a useful area for further study in the future.

In order to avoid divulging the location of features which may be sensitive for other reasons (such as peregrine or chough nesting sites), features will be mapped only as physical (eg archaeology, geology, landscape) or biological (communities, species). An indication will also be given as to whether the potentially sensitive feature is permanent or seasonal.

<b>Figure 1. Features and consultees.</b>		
<b>FEATURE</b>	<b>COMMENTS / REFERENCES</b>	<b>CONSULTEES</b>
Caves	See comments under Intertidal communities, Bats, Seals and nesting Birds.	See below
Intertidal Communities	Refer to Tyler-Walters (2005). P29. CCW Phase 1 intertidal survey.	Aethne Cook CCW Ann Bunker CCW Kate Lock CCW Dr Robin Crump
Nesting Birds: Oystercatcher, Rock Pipit, Raven, Shag, Cormorant, Razorbill, Guillimot, Fulmar, Kestrel, Peregrine, Chough.	Atlas of breeding birds Pembrokeshire	Bob Haycock CCW Jane Hodges PCNPA
Cliff top plant communities	At access points only.	Steven Evans (awaiting response) Bob Haycock
Scheduled Ancient Monuments	Mainly access points, but some extend to foreshore.	Polly Groom CADW James Meek DAT Pete Crane PCNPA
Creation of informal paths.	Google earth or local knowledge.	
Wilderness / tranquility	Impacts on visitor experience for other users of the coast. Research needed.	
Geological features		Sid Howells (awaiting response)
Seals	Seasonal impacts at pupping sites.	Bob Haycock CCW Anne Bunker CCW
Bats	May use sea caves to roost.	Bob Haycock CCW Jane Hodges PCNPA Anne Bunker CCW
Otters	Refer to Lyles, 2009.	Sue Burton Marine SAC Officer

## 4.0 Outcomes

### 4.1 Caves

Consultations have highlighted the potential for sensitive features to be present in caves. These features include seal pupping, bats, nesting birds and sensitive biotopes normally found in the low light levels usually associated with deeper water. Tyler –Walters (2005) identifies caves and overhangs as potentially sensitive. The most practical way forward (as surveying all caves in advance is not practicable) is to flag caves as potentially sensitive and seek consultation before use, or to avoid caves as best practice. The location of caves will therefore be included in the mapping exercise.

### 4.2 Seals

Seal pupping areas are highly sensitive to disturbance during the pupping season. This feature should therefore be mapped as a seasonal feature. Pupping sites are recorded by CCW, but the information is considered sensitive. Further consultation is required to make this information available for the scoping study in a format which will not compromise the security of the information. See also comments under section 4.1.

Informal agreements to avoid known pupping caves in the pupping season already exist (Luddington, pers. Comm.).

### 4.3 Intertidal Communities

Biotopes potentially sensitive to coasteering have been identified by Tyler-Walters (2005). The distribution of these biotopes has been mapped by CCW during the Phase 1 intertidal survey. These features will be mapped for reference. However, many are restricted to the area at or below mean low water. A practical way forward may be to avoid coasteering close to low water as best practice. Low water is not a period favoured by coasteerers because of the risk of slipping on algae and the lack of sufficient depth of water for jumping from ledges (Luddington, pers. Comm.). Caves represent a special case where sensitive biotopes normally associated with deep water may occur near the surface (see comments under section 4.1).

### 4.4 Cliff Top Plant Communities

There is potential for damage to sensitive cliff top plant communities at access points. Further consultation with conservation professionals is required to establish the likely significance of localised effects on this feature. If sensitive communities are identified and the potential impact is considered significant, the distribution of this feature will be mapped.

### 4.5 Geological Features

There is potential for damage to protected geological features due to trampling. Further consultation is required to establish the likely significance of localised effects on this feature. If sensitive features are identified and the potential impact is considered significant, the distribution of those features will be mapped.

### 4.6 Bats

Some sea caves are used by bat species for roosting. Where bat roosts occur, they are considered likely to be sensitive to disturbance where recreational groups enter caves. See comments under Section 4.1.

Informal agreements to avoid bats in caves at Lydstep already exist (Luddington, pers. Comm.).

#### **4.7 Otters**

Lyles, G (2009) demonstrated that otters use the coast in the Pembrokeshire Marine Special Area for Conservation quite widely. Most feeding dives occurring within 20m of the shore. It is reasonable to extrapolate these findings to Pembrokeshire as a whole. Otters may be sensitive to coasteering if using coves to lie up during the day.

Information is not available to map sensitive sites in general. A practical way forward would be to seek consultation on otters before new routes are opened.

#### **4.8 Scheduled Ancient Monuments**

Most Scheduled Ancient Monuments occur at cliff tops or inland (although a few extend to the foreshore). These features are therefore mainly sensitive to coasteering at access points. Access routes should be sought which avoid Scheduled Ancient Monuments. The location of coastal Scheduled Ancient Monuments will be mapped to aid identification of appropriate routes.

#### **4.9 Cliff nesting birds**

Several species of cliff nesting birds have been identified as potentially sensitive to coasteering. Information on the distribution of these features is awaited from relevant professionals. Further consultation is required to ensure that the information is mapped in a way which does not jeopardise the security of nest sites seen as sensitive to other sources of potential disturbance.

#### **4.10 Creation of Informal Paths**

Concerns have been expressed about the potential for new informal paths to be created at access points which may encourage others to stray from the coast path, potentially exposing them to increased risk of injury. Creation of new rights of way and implications for path maintenance are also of concern.

However, it is difficult (and not necessarily desirable) to distinguish between paths created for coasteering and those created for other activities (such as angling or climbing). The issue appears to be mainly one of scale, given the growth in participation in coasteering. Further consultation is required to address this issue.

#### **4.11 Wilderness / Tranquillity**

Research into the perceptions of non participants with regard to setting, group size and frequency of encounter is underway by the author.

### **5.0 Summary**

The literature review identifies the potential for coasteering to impact upon the natural resource which supports it. There is, however a lack of detailed information on the extent and magnitude of these impacts, or their significance for the potentially sensitive features identified.

Discussions with conservation professionals have highlighted a range of features potentially sensitive to coasteering. However, the scoping study is intended only to identify features which are potentially sensitive to coasteering and map their distribution. No attempt will be made to *interpret* that information. For example, should species or communities with a high conservation status be given a weighting to reflect their importance, or is sensitivity per-se enough to trigger management action regardless of conservation status? These questions should be addressed at an appropriate forum such as the Pembrokeshire Outdoor Charter Group.

In order to facilitate the sustainable development of this activity in Pembrokeshire, a proactive and precautionary approach should be taken which engages all stakeholders in the formulation of voluntary codes of practice. This could build on the success of previous initiatives such as the Marine Code and the Climbing Access Restrictions. The scoping study currently underway on behalf of the National Trust could act as a useful tool in consensus building in a suitable forum such as the Pembrokeshire Outdoor Charter Group.

## References

- Activity Pembrokeshire (2010) Coasteering Website. Available from; <http://www.activitypembrokeshire.com/content.asp?nav=4&type=15> [accessed on 11/06/2010].
- British Coasteering Federation (2010) Coasteering Website. Available from; <http://www.britishcoasteeringfederation.co.uk/coasteering.html> [accessed on 09/06/2010].
- Celtic Quest Coasteering (2010) Family Coasteering Website. Available from; [http://www.celticquestcoasteering.com/coasteering/index\\_second.php?section=Families](http://www.celticquestcoasteering.com/coasteering/index_second.php?section=Families) [accessed on 09/06/2010].
- Davenport, J & Davenport, J. L. (2006). The Impact of Tourism and Personal Leisure Transport on Coastal Environments: A Review. *Estuarine and Coastal Shelf Science*. 67. P 280-292.
- Devesa, M. Laguna, M. & Palacios, A. (2010) The Role of Motivation in Visitor Satisfaction: Empirical Evidence in Rural Tourism. *Tourism Management*. 31: 547-552.
- Luddington, L. R. (2008) Pilot Study to Develop a Method to Monitor Recreational Activities on the South St David's Coast. Report for the Pembrokeshire Coast National Park Authority. PCNPA, Llanion Park, Pembroke Dock. Pembrokeshire.
- Luddington, T. Activities Liaison Officer, Pembrokeshire Outdoor Charter Group. Personal Communication.
- Lyles, G. (2009) Otter (*Lutra lutra*) Activity on the Open Coast within the Pembrokeshire Marine Special Area of Conservation. Report to the Pembrokeshire Marine SAC Relevant Authorities Group. MHPA. Gorsewood Drive. Milford Haven. Pembrokeshire.
- Lynn, N. A. & Brown, R. D. (2003) Effects of Recreational Use Impacts on Hiking Experiences in Natural Areas. *Landscape and Urban Planning*. 64: 77-87.
- Macnaghten, P. (1995) Public Attitudes to Countryside Leisure: a Case Study on Ambivalence. *Journal of Rural Studies*, 11 (2): 135-147.
- Martinez-Abraín, A., Oro, D., Jimenez, J., Stewart, G. & Pullin, A. (2010) A Systematic Review of the Effects of Recreational Activities on Nesting Birds of Prey. *Basic and Applied Ecology*, 11: 312-319.
- PCC/PCNPA (undated) Pembrokeshire's Personal Water Craft and Speed Boat Code of Practice. Available from;

<http://www.pembrokeshiremarinecode.org.uk/documents/watercraft.pdf> [accessed on 12/07/2010].

Pembrokeshire County Council / Pembrokeshire Coast National Park Authority (2006). Joint Unitary Development Plan for Pembrokeshire. Available to view at County Hall, Haverfordwest, Pembrokeshire, or online at; [http://www.pembrokeshire.gov.uk/content.asp?nav=109&parent\\_directory\\_id=646&id=5058](http://www.pembrokeshire.gov.uk/content.asp?nav=109&parent_directory_id=646&id=5058) [accessed on 14/04/2010].

Pembrokeshire Coast National Park Authority (2003). National Park Management Plan 2003 – 2007. Available from PCNPA offices, Llanion, Pembroke Dock or online at; [http://www.pcnpa.org.uk/PCNP/live/sitefiles/related\\_items/NPMP.pdf](http://www.pcnpa.org.uk/PCNP/live/sitefiles/related_items/NPMP.pdf) [accessed on 17/04/2010].

Pembrokeshire Coast National Park Authority (2004). The State of the Park, 2004. Available from PCNPA offices, Llanion, Pembroke Dock or online at; [http://www.pcnpa.org.uk/PCNP/live/sitefiles/related\\_items/state\\_of\\_park\\_report\\_2004\\_eng.pdf](http://www.pcnpa.org.uk/PCNP/live/sitefiles/related_items/state_of_park_report_2004_eng.pdf) [accessed on 17/04/2010].

Pembrokeshire Coast National Park Authority (2008) National Park Management Plan 2009 – 2013. PCNPA, Llanion Park, Llanion, Pembroke Dock. Pembrokeshire. SA72 6DY. Available from; [http://www.pcnpa.org.uk/PCNP/live/sitefiles/related\\_items/NationalParkManagementPlan2009-2013Eng.pdf](http://www.pcnpa.org.uk/PCNP/live/sitefiles/related_items/NationalParkManagementPlan2009-2013Eng.pdf) [accessed on 15/06/2010].

PCNPA (2009) Agreed Climbing Restrictions Pembrokeshire 2009. Available from; [http://www.pcnpa.org.uk/PCNP/live/sitefiles/related\\_items/climbing\\_english\\_3.pdf](http://www.pcnpa.org.uk/PCNP/live/sitefiles/related_items/climbing_english_3.pdf) [accessed on 12/07/2010].

Pembrokeshire Outdoor Charter Group (undated a) Pembrokeshire Marine Code, North Pembrokeshire. Available at; <http://www.pembrokeshiremarinecode.org.uk/documents/MarineCodeNorth2010.pdf> [accessed on 12/07/2010].

Pembrokeshire Outdoor Charter Group (undated b) Pembrokeshire Marine Code, South Pembrokeshire. Available at; <http://www.pembrokeshiremarinecode.org.uk/documents/MarineCodeSouth2010.pdf> [accessed on 12/07/2010].

South West Wales Coastal Recreation Audit (2009) Interim Survey Report 2009. Pembrokeshire Coastal Forum. Milford Haven. Available from; <http://www.pembrokeshireoutdoors.org.uk/documents/SWWRecreationAuditInterimReport2009f.pdf> [accessed on 14/06/2010].

Thomas, D. (2007) The Impact of Coasteering on *Fucus vesiculosus* in St Non's Bay. Undergraduate dissertation. Pembrokeshire College. Merlin's Bridge, Haverfordwest, Pembrokeshire.

Tribe, J., Font, X., Griffiths, N., Vickery, R. & Yale, K. (2000) Environmental Management for Rural Tourism and Recreation. London. Cassell.

TYF (2010) TYF Coasteering Website. Available from; <http://www.tyf.com/?c=act-coasteering> [accessed on 09/06/2010].

Tyler-Walters, H. (2005). Assessment of the potential impacts of coasteering on rocky intertidal habitats in Wales. Report to Cyngor Cefn Gwlad Cymru / Countryside Council for Wales from the Marine Life Information Network (MarLin). (CCW Contract No NWR012). Marine Biological Association of the UK, Plymouth.

Urry, J. (1990) *The Tourist Gaze: Leisure and Travel in Contemporary Societies*. London. Sage Publications.

Welsh Assembly Government (2008) *Coastal Tourism Strategy*. Visit Wales, Cardiff. Available from; <http://wales.gov.uk/docs/drah/publications/Tourism/090612coastaleng.pdf> [accessed on 14/06/2010].