

RESPONSE TO CONSULTATION

TO:- Consultation Officer; Environment Agency; Angela Proctor.

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Porlock Manor Estate; Planet Practice.

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**SUBJECT: Bristol Channel Draft Shoreline Management Plan;
Porlock Bay; Porlock Weir.**

1. INTRODUCTION

- 1.1 Porlock Weir forms part of a largely natural coastal system; systems change; this is a very dynamic system.
- 1.2 There has been a natural harbour at Porlock Weir for centuries in its present location. In geomorphic and anthropomorphic terms it is not unlikely that there was even an earlier harbour still, dating from near the end of the last ice age 8000-6000 years BC. Archaeologists still may find evidence that may tend to support that, a little out to sea from the present location.

2. RECENT HISTORY

- 2.1 Evidence was presented to the House of Commons Agriculture Committee by Mark Blathwayt, Planet Practice, on behalf of the Porlock Manor Estate which was published in 1998.(Sixth Report; Flood and Coastal Defence; Volume 2)
- 2.2 Included in this evidence was the repetition of the call, earlier made by Professor John Pethick, for there to be a proper funded new study into sediment supply from the west; this has still not been made. Instead the literature review simply repeated the earlier omissions in the science.
- 2.3 Following damage caused by a high spring tide in February 1990, increased by coincident low atmospheric pressure, it was necessary, completely, to replace the timber harbour mouth groyne. The Porlock Manor Estate was not content to replace the groyne in the previous 'right angled' form proposed by

the Local Authority, which in the view of the Estate, would have perpetuated unwanted interruption of shingle flow and long shore drift.

2.4 Instead, to promote a more sustainable easier flow of shingle past the harbour mouth, the Estate itself built a “buzzard’s beak” shaped groyne to replace it, much more aligned to the east. It works much better. Shingle is no longer trapped at Porlock Weir as it may have been to some extent before.

3. PRESENT ISSUES

3.1 When the 1990 groyne is itself replaced, which will be needed within 5 years, the Estate’s expert advice is that the “hook” of the buzzard’s beak shape should be made more pronounced and the length of the groyne itself be reduced.

3.2 It is over a century since the present lock gate arrangements at Porlock Weir were installed, in 1887; following which a new status of equilibrium in coastal processes has become established between shingle movement and shingle deposition; as managed, all shingle reaching the harbour mouth groyne now passes past Porlock Weir towards the storm beach.

3.3 To the east, the shingle storm beach is established in a steady state of change; it is the natural pattern of storm beaches to be overtopped; some ‘rolling back’ is always part of the geomorphology of a storm beach; in other places there is steady seaward accretion.

3.4 The “new gap” in the storm beach, to the West of “New Works” in Porlock Bay, is highly dynamic; large volumes of shingle from Porlock Weir reach the gap; are pushed into the gap; and then washed out to sea; before being pushed back again towards the storm beach. Most of the pushed back shingle comes back to the west of the gap again, either as pebble or eroded as sand; only a small proportion works eastwards, meaning that, east of the gap, the shingle ridge is thinning as long shore drift removes material without yet being replaced; eventually a steady state of change will establish and there will be reached an equilibrium where most shingle reaching the gap passes by the gap.(as it already does at the entrance to the harbour at Porlock Weir)

3.5 It is a point of agreement, that at some stage in the future, perhaps in several thousand years, the continuity of shingle flow may lead to the gap re closing, re-establishing a storm beach pattern in which the storm beach is regularly overtopped but seldom breached.

3.6 Examination of lacustrine deposits on Porlock Marsh confirms that this process of inundation and sea flooding and creation of coastal grazing marsh has been episodic and continuous in pattern.

3.7 What was very damaging to local systems was ill advised attempts to tamper with the profile of the ridge to prevent over topping; overtopping is an essential part of the natural geomorphology of a storm beach.

4. IMMEDIATE FUTURE

4.1 Porlock Weir, as a settlement for fishing and as a base for trade and exploration, has seen many changes in the last 6000 years. Natural changes will continue. Man made systems and structures will continue to need to adjust to these changes.

4.2 The emergency sewage outfall, that serves all of West Porlock as well as Porlock Weir, still functions as essential maintenance infrastructure and will continue to affect wider management options at Porlock Weir.

4.3 Tidal ranges in the Bristol Channel, including Porlock Weir, are the highest in Europe and the second highest in the world. Such conditions make scientific, valid or useful comparisons with the east coast of England, or even Burnham-on-Sea further up the Bristol Channel, difficult.

4.4 Porlock Weir is backed by high ground and adaptive changes to roads buildings and infrastructure are sustainable and feasible.

4.5 The reasons put forward in the consultation documentation and elsewhere for discontinuing maintenance at Porlock Weir after 2025 do not stand proper analysis or scrutiny in physical, economic or geographical terms. Indeed, the administrative position seems clearly inconsistent and less than completely rational.

5. DATA, PRESENT POLICIES AND PRACTICE.

5.1 The Porlock Manor Estate continues to advocate working with natural processes. This sustainable 'local' approach has brought great benefits at low cost.

5.2 The Local Authority and the Environment Agency have not had to do much, if any, physical work in the last fourteen years; scientific monitoring and recording by independent scientific specialists continues to be important.

5.3 According to credible scientific sources available to all, sea level rise in the next 100 years will be in excess of 1.4 metres. Based on other available evidence, the Porlock Manor Estate is inclined to plan on the basis that this

figure of 1.4 metres sea level rise seems likely to be a truer more realistic forecast than other lower estimates; accordingly all Estate planning is made on this basis.

5.4 The Government approved DEFRA figure, is lower, at a mere 0.54 metres sea level rise; it has been adopted by the Environment Agency; it may not be so helpful in providing proper “long term” cost effective solutions and answers to problems.

5.5 Storm Beaches and natural shingle banks are naturally adaptive; they become higher with sea level rise. Sediment supply from cliff falls and, landslides increase as higher tide levels cut back the protection to the bases of cliffs. Increased frequency of flash flood events increases the measurable amount of river sediment pebbles and boulders input into coastal systems.

6. LESSONS THAT INFORM

6.1 If it is true to say that Porlock Bay, its Porlock Storm Beaches and Marshes have been used, to the benefit of the United Kingdom as a whole, as a useful “guinea pig” to demonstrate the human and physical interactions involved in such concepts as “managed retreat”, then there may be further useful lessons to be learnt.

6.2 Re-location of coastal footpaths; impacts of radical change or destruction of breeding habitats for rare birds; changes promoting “replacement” habitat to compensate for the environmental impact of, for example, impounding Cardiff Bay or creating new port facilities at Bristol.

6.3 These lessons must include assiduous exploration of how compensating alternative sustainable housing and business premises can be created inland on higher ground. This too is a national priority, with implications across the United Kingdom.

6.4 It demands a return to the question whether power stations should, whenever possible, and whatever power source, be located so as to be used as “foci” for development with the huge quantities of very hot cooling water produced being used to provide, in district heating schemes, integrated combined heat and power for universities, hospitals, industrial estates and whole residential areas at very much lower costs, achievable with less waste in transmission losses and greater energy efficiency. Is not this better than adding to the measurable environmental damage caused by injecting huge quantities of very hot water into the sea?

6.5 Most leading scientists agree that if rising atmospheric temperature is a problem, the damage done to ecosystems affecting micro plankton fish and birds by higher sea temperatures is many times more severe.

7. RECOMMENDATIONS

7.1 In Harbour and building terms, there are at Porlock Weir and elsewhere, imminent changes which can be successfully met with existing building technology; architectural skill adapting existing buildings to the new conditions, affording new uses, modifying existing structures, including sewage systems, and harbour structures and roadways to suit new environments sustainably.

7.2 Porlock Weir is a sustainable community. The balance of homes and businesses play an important part in the ‘industry of regional tourism’ in the Exmoor National Park.

7.3 All sustainable communities require room to expand to meet local residential and employment needs and those of migrants.

7.4 Porlock Weir is very well placed indeed to develop to maintain this sustainability in line with long term management systems that have evolved to meet need for well over 300 years of family ownership, matching visual beauty with economic dynamism.

7.5 “New Build” sites for homes and businesses exist already and have been identified; current immediate need can be met successfully in landscape and land use terms in line with a continuous Estate Policy; this is a policy of evolution in harmony with the landscape itself and listening to the needs of all the people who are needed to make a thriving community.

7.6 In view of these benefits, the cost to the nation, of continuing to provide some level of funding to conserve and adapt Porlock Weir is small.

8. OBSERVATION

8.1 If the assumptions and policy decisions proposed in this consultation were applied elsewhere in the European Union, the results would include the virtual disappearance of the Netherlands. Both the Netherlands and Porlock and other coastal Communities will be better served by a grassroots approach informed by the very best accurate science. Local communities can then form

a balanced view about what is best and achievable by them and what is unrealistic.

8.2 Local Communities should have been involved much earlier in this process, not merely “consulted” some “four or five years down the line; consulted virtually at the end”

8.3 Grassroots, “bottom up” looking at the issues would generate, more quickly much more realistic useful, fertile, practical, productive partners for scientific and environmental specialists.

9 RECAPITULATION

9.1 It is hoped that this response to the consultation on the Draft Shoreline Management Plan may prove useful and relevant to Porlock Weir and helpful, if possible, to the wider community and for the common good of the country.

9.2 The response has sought to be focussed, so as:

- to be placed in a present relevant context (heading2);
- to examine present issues (heading3);
- to view the immediate future (heading4)
- to examine the proper applicability of data, policies and practice (heading5)
- to look at where lessons are there to be learnt (heading 6)
- to make recommendations (heading 7)
- to make observations that may help future consultation. (heading 8)

It is hoped that this response is helpful to the seeking of excellence in science and common sense in making decisions that involve all local people affected.

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