

ISSUE REPORT COMMENTS

Coastal Defence

Comment No	Full Organisation Name	Chap. No	Relevant Issue No	Comment Text
3	Westbury-on-Severn PC	5.		Re-establish the ancient techniques of flood defence (through tree planting or deposition of man-made material) to protect the area of the Oakel Street Flood Alleviation Scheme.
17	Somerset County Council	5.	Map 5	Not all coastal defences are shown on the map e.g. additional sections (specifically a rock armour) thought to exist between Burnham-on-Sea and Brean Down
23	Somerset County Council	5.	C5.	For clarification the following text could be included ; Earth moving work associated with coastal defence work can damage or destroy buried archaeological remains. Changes in erosion patterns can also adversely affect exposed archaeological remains. In addition the defences themselves may be of significant archaeological importance.
24	Somerset County Council	5.	C5.	The last paragraph gives totally misleading impression and should be deleted - suggested replacement : Archaeological evaluation may be required in advance of capital works and archaeological mitigation measures can include a range of options such as excavation or a watching brief during earth moving activity.

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25	Somerset County Council	5.	C5.	Archaeological advice should be sought at the earliest possible stage in sea defence capital works to allow time for adequate mitigation measures to be instigated. A desk top study of sea defence works in the estuary could provide information on the archaeological significance of the various proposals.
64	Inland Waterways Association, London	5.	Map 5.	The key has an unclear symbol for canals.
161	Dunster Beach Holidays	5., 8.		Please provide any further information available regarding progress in proposed coastal defences, clean-up operations.
173	Kingston Seymour PC	5.	C - All	The maintenance and improvement of coastal defences is vital.
174	Kingston Seymour PC	5.	C2.	Primarily concerned with flood prevention, and it is noted that new defences are scheduled at Hurditches in the period 2000-1.

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175	Kingston Seymour PC	5.	C7.	The comments regarding the tide-locking effects of sea level rise are noted and it is suggested that the North Somerset Internal Drainage Board are asked to respond to these in relation to this area, if this has not already been done.
185	Country Landowners Association, Gloucestershire	15., 5.	M14.	Concern about the importance of getting the science right. This requires the widest involvement of scientists, engineers and landowners who have many years experience of managing their particular area. Deeply suspicious of desk exercises which do not take into account local knowledge. Also fear that wrong solutions will be reached if local knowledge is not heard. Concern has specifically been expressed regarding the use of 'wrong science' in the case of coastal defence simply out of a need for expediency.
205	Country Landowners Association, Gloucestershire	5.	R8., C1., C2., C3.	The value of IDB is noted because of their importance to the protection of rural villages and farm land from flooding. CLA wish to see IDB's maintained in future and their representatives involved in the planning of this strategy.
208	Country Landowners Association, Gloucestershire	5.	C1., C2., C3., C6., C7.	CLA emphasise that protection of property and land with improved sea and tidal defences and the improvement of drainage outfalls will be even more important in future if sea levels rise.

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209	Country Landowners Association, Gloucestershire	5., 13.	C4., N1.	Wildlife habitats are under threat of loss with increases in sea level, with no easy solutions and the science of maintaining or creating sea line habitats is hardly understood.
210	Country Landowners Association, Gloucestershire	5.		CLA feel that there is no public forum at present, to deal with coastal defence issues, and government agencies are judge and jury of all schemes. Wider scrutiny must be applied.
211	Country Landowners Association, Gloucestershire	5.	C1.	All proposals should be considered on their merits and not as part of a blanket strategy.
212	Country Landowners Association, Gloucestershire	5.	C5., C4.	The effect of coastal defence schemes on other landowners up and down the coastline must also be taken into account.

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242	Community Council of Goldcliff	5.	C3.	Great concern of the risk of flooding in the Goldcliff and Whitson area.
243	Community Council of Goldcliff	5.	C2., C3.	How far has the programme of maintenance and improvement progressed on the Sukmouth to Goldcliff (Caldicot Level). It is requested that a member of the Environment Agency attend a Community Council of Goldcliff meeting to report in relation to the flood prevention works to alay some of their fears.
279	British Geological Survey	15., 5.	M14., C4.	New data needed in the estuary is a running programme to measure changes in inter-tidal flat levels, this needs to be repeated on a regular basis (every two years) for the foreseeable future until a measure of the changes has been obtained. Wind and wave data should also be collected at the same time. The EA may already be doing this but there is a need for SES to collate what is being done.

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281	British Geological Survey	15., 5.	M17.	<p>The need to prioritise the issues identified in the Report</p> <p>Although recognised as being important to bring in as wide a range of issues as possible, some are more important than others. The big problem in the estuary, regards the required expenditure, is coastal defence. The way which this is addressed impacts on most other areas, and it is felt that a clear guide to the public on the issues involved would help decision-makers obtain approval for any programmes.</p>
291	Gloucestershire County Council	5., 12.	C5., L1.	<p>More emphasis should be given to the consideration of soft engineering options or managed retreat as hard engineering solutions often have an unacceptable impact on the landscape.</p>
324	NFU, South West Region	5.	C4.	<p>Agricultural land should be specifically mentioned. The NFU recognise that managed retreat is an issue which will require careful consideration as coastal defence budgets come under pressure as a result of sea level rise. Farm land is likely to receive the brunt of these impacts before other land which has a higher flood defence priority. Clearly, this is of considerable concern to those farmers and communities that it may affect. There would be issues of compensation for farmers and landowners whose land was no longer protected.</p>

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349	Youth Hostels Association	5.	C5.	The impact of coastal defences on sites of geological interest should also be considered. Soft engineering solutions are supported.
350	Youth Hostels Association	5.	C6.	YHA feel that they might have to accept that some areas will be the subject not of defence but of planned withdrawal.
363	Youth Hostels Association	5., 9.	C5., A3.	YHA do not support activities which lead to coastal erosion and the reduction of beach sand.
386	University of Reading	5., 12.		Sections of the report should be amended where possible to make clearer the origins and the significance of certain archaeological, engineered structures on the lowland coastal lands (full description given).
392	University of Reading	5.		Concern regarding the essentially offensive (in a military strategic sense) and wealth-creating nature of primary saltmarsh reclamation; only after a seabank has been built and the enclosed land settled and reorganised agriculturally or for industry does the bank become a defensive structure.

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431	Caldicot and Wentlooge Internal Drainage Board	5., 3.		The C + W Levels Drainage Board directly control water levels in all the ditches (Reen) systems and are as an integral part of any consultation process as the Environment Agency / Countryside Council for Wales etc. and this point needs to be made clearer in the Report. Indeed most proposals of whatever nature affecting the Levels Area require an official land drainage consent from the Board before they can proceed.

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432	Caldicot and Wentlooge Internal Drainage Board	3., 5.		<p>The area of C & W Levels Drainage Board lies between Cardiff and Chepstow and encompasses all low lying land below high tide level and which is in danger of flooding from tidal inundation and / or flooding of the natural flood plain of the Levels during periods of heavy rainfall, and no guarantee can be given against the worst effects of abnormal weather and tidal conditions.</p> <p>Nationally such low lying areas are totally dependent on complex systems for Flood Defence and Land Drainage. Without such system the development of homes and factories, the provision of public services and the productive use of farm land would not be possible.</p> <p>The whole area of some 24,000 acres is drained by an integrated complex network of Reens and the integrity of the main reen system is essential to the effective drainage of both lands inside and outside of the area.</p> <p>Large parts of the Cardiff and Newport developed areas lies within the Boards Area and the remainder draws into it.</p> <p>The Country is as dependent as Holland upon Drainage Authorities maintaining and updating these systems. The work is vital to protect the millions of people who live and work within these areas and to retain the industrial and agricultural production from them.</p> <p>Extensive areas, including major centres of</p>

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				<p>population and industry, are at risk of being flooded from the sea, rivers and smaller watercourses. Major events have been recorded through history and it is an exceptional year when no significant property flooding takes place somewhere in the Country. The risk of flooding will never be removed but, can be minimised with the proper management of the flood defence and drainage systems.</p> <p>In the Board's area, there are main drainage channels which the Boards maintain in the best interest of the total area which drains to it, which is now becoming developed, with a high proportion of paved areas, which increases the flow to the watercourse during periods of heavy rainfall.</p> <p>The designs of the surface water disposal system to be a 1:100 year standard Run-Off from developed sites to be restricted to greenfield flows (flow criteria : 3.5 l/s/hectare, 286m³ storage per hectare for 65% developed area).</p> <p>Any storage lost as a result of watercourses being filled shall be replaced with an equivalent volume of storage being provided elsewhere, over and above storage requirements for greenfield run-off requirements.</p> <p>Compliance with the recommendations in the following Reports :-</p> <ul style="list-style-type: none"> a) Welsh Office Circular 68/92 - Development of Flood Risk Areas. b) H R Wallingford 'Wentlooge Levels Project Study Report' No EX 2511 June 1992.

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433	Caldicot and Wentlooge Internal Drainage Board	3., 5.	D8., C7.	<p>Height of highest tide 8.4m AOD. Approximate ground level of development 5.8m AOD It should be noted that Global Warming and Tectonic Change (Isostatic Compensation etc.) will affect the 1:100 year tide level (of 8.4m AOD) by 200mm over the next 40 years.</p> <p>Should the area become developed, it is normal for the private farm ditches to be infilled and replaced by a piped drainage system, with attendant storage lagoons etc., by the developer, but the sanctity of the IDB and the Environment Agency Network cannot be over-emphasised. With respect to the conditions of the watercourses, the main watercourses have maintenance works carried out on them each year, to maintain their efficiency (within the overall expenses of the Board).</p> <p>The liability of the owner of the property to repair or rebuild reens, falls only on the private farm ditches or the capital cost of any re-routing of adopted watercourses, and certainly the idea of the IDB adopting more watercourses, in line with the continued improvements necessary to meet the increasing demands placed upon the system as a result of developments can be explored once the watercourse has been improved to an adoptable standard as has recently been the case with a reen adjacent to the IDB Rhosog Fawr Reen in Trowbridge.</p>

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434	Caldicot and Wentlooge Internal Drainage Board	5., 8.	W1.	<p>One of the main problems the Board faces in adequately maintaining watercourses, is the large amount of extraneous rubbish which finds it's way into the watercourses (incl. 3 piece suites, supermarket trolleys, rubbish bags etc.) This is not only environmentally unacceptable but, greatly increases the flood risks from blockages of culverts and interruption of the flow of flood water along the watercourse.</p> <p>Some Suggestions Any help the Local Community can give in minimising this problem would be gratefully appreciated. Meanwhile, the Drainage Board will continue to liaise with the Local Authority such that further improvements in the manner in which the Drainage Board work can be carried out in as environmentally acceptable way as possible can continue to be pursued.</p>
459	South Gloucestershire Council	5.	C8.	<p>Flood Warning S Glos. Council co-ordinates action with the Pilning and Severn Beach Parish Council in the event of a tidal warning being received for Severn Beach.</p>
562	CPRE, Avon / CPRW, Monmouthshire	5.	Map 5	<p>There is no indication on Map 5 that the lengths of shoreline marked heavily in green do not have man-made defences. If they do, it is clearly incorrect To state "the majority of the shore remains naturally defended" (Background text pg. 50).</p>

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563	CPRE, Avon / CPRW, Monmouthshire	5.		Standards of protection from flooding Use of the word "sustainable" in this context (penultimate sentence) creates confusion with the new and popular 'sustainable development' concept. "A more permanently viable location" would have been preferable wording.
564	CPRE, Avon / CPRW, Monmouthshire	5.	C5.	Apart from not increasing risks of flooding elsewhere, "mitigation" should avoid destroying the natural character of the area, which may be very exposed to view from a number of vantage points.
565	CPRE, Avon / CPRW, Monmouthshire	5.		Flood Warning The October / November 1997 edition of the Environment Agency's broadsheet Environment Action, provides details of its new flood warning system.
566	CPRE, Avon / CPRW, Monmouthshire	5.		Coastal Protection More information about the Coast Protection Act would have been useful, from which year does it date, for example, and what type of protection does it confer?

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683	Cardiff County Council	15., 5.	M10., M7., C1.	<p>Planning Dept. comments</p> <p>Report highlights the current level of co-operation in relation to coastal cell, dredging, aggregate studies and information.</p>
684	Cardiff County Council	5., 9.	C4., C5., C3., A3., A4., A5.	<p>Planning Dept. comments</p> <p>A lot is being done, but there are conflicts / different interpretations of how natural forces and human activities affect the coast, resulting in deposition and erosion.</p>
686	Cardiff County Council	15., 5.	C1., M7., M10.	<p>Planning Dept. comments</p> <p>Illustrates the need to look at issues across a wider area than individual local authorities.</p>
736	The Ports Panel	5., 15.		<p>For final framework document - suggested statement outlining the basic requirements of this chapter.</p> <p>"To provide environmentally, technically and economically acceptable flood defences, developed through a strategic understanding of physical processes and interest on and adjacent to the Severn Estuary".</p> <p>"To ensure that the planning and implementation of flood defence strategies contribute to the sustainable development of the estuary".</p>

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747	The Ports Panel	5.		<p>There is evidence to suggest that the foreshore is eroding at a marked pace in some locations. This process, without the possible effects of sea level rise (yet to be quantified in the estuary), will reduce the total amount of the energy absorbing material of the intertidal area and will lead to increased risk of flooding. This will have direct implications for the management of the estuary. Increasing wave height (above sea level) may result in over-topping as well as the increased erosion of habitats that were previously beyond the direct influence of the sea. An estimated area population of around 2,000,000 reflects the overwhelming need for flood defence. Flooding has many consequences ranging from possible loss of life to damage to property, agricultural land, archaeological resources and conservation areas.</p>

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750	The Ports Panel	5.		<p>Suggested text for Key Issue in Strategic Framework Document</p> <p>Sea Level Rise</p> <p>(a) There is a need to plan a response to the combined effects of foreshore erosion and sea level change.</p> <p>(b) The extent of sea level rise in the estuary needs to be determined and quantified. Foreshore erosion in many places is well recorded and on-going . The combined effect of these two processes is to reduce the energy absorbing potential of the foreshore leading to the erosion of the saltmarshes and ultimately to a breakdown of the sea defences. Loss of intertidal habitat will reduce the ability of the estuary to support over-wintering waterfowl.</p> <p>The work of the coastal cells groups will improve our understanding of these processes, the particular areas of vulnerability and the defensive strategies available to us. However the SES must be prepared to place its work in the context of the overall Strategic Management Framework of the estuary.</p> <p>(c) In the long term the estuary should function with and facilitate the natural processes that become apparent.</p> <p>Ensure that the responsible bodies manage flood defences or retreat on a long-term basis to address the effects of sea level rise and erosion.</p>

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751	The Ports Panel	5.		<p>Suggested text for Key Issue in Strategic Framework Document</p> <p>Flood Protection</p> <p>(a) There is a need to reduce the risks to people and to the developed and natural environment which may arise from flooding by encouraging the provision of technically, environmentally and economically sound and sustainable defence measures.</p> <p>(b) Flood protection needs to be balanced between the effects on natural processes and socio-economic requirements.</p> <p>During the re-assessment of the need for and structure of flood defences opportunities may arise for the development of experimental / pilot schemes into the creation of habitat as and when necessary.</p> <p>(c) To protect the industrial and agricultural resource of the estuary from the threat of flooding.</p> <p>To ensure that valued ecological resources are protected.</p>
840	Individual	6., 4., 13., 5., 8.	T7., T5., R6.	<p>More fields are now ploughed by the coast paths. The soil can 'run off' to the estuary thereby adding to the silt problem. Ploughs taken to very edge of cliffs, then huge cracks can appear in dry weather accelerating landslip. Suggested that ploughs should not be taken to within 12 feet of the cliff edge.</p>

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842	Individual	5.	C4.	Restoration of the beaches to New Passage (despite pebbly, provided childrens' play areas/ picnic sites).
848	Individual	8., 5., 15.	W1., W2., W3., W5., W6., W7., C4., M16.	Relevant expertise exists aplenty re sewage and litter, and the topic must be researched.
855	Nuclear Electric Ltd	5.	C1.	A strategic approach to managed retreat - attempts should be made to try to regain a semi-natural estuarine shore. Suggest talk to John Pethick.
860	Nuclear Electric Ltd	5.	C1.	Need to pull back from existing lines of defence. This will allow lower defences, increased salt marsh, a greater ability of the estuary to absorb surge events, and remobilise long shore transport. This will be cheaper in the long run (must be seen to pay for itself).

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861	Nuclear Electric Ltd	5.	C3., C5.	Farming subsidies are not the answer, these are only a temporary fix.
863	Individual	3., 5.	D1.	<p>Man's development in and around the estuary should be kept to a minimum as there are long term effects. In Gloucester, hundreds of acres of flood plain lost (council tipping and landfill) and concern re. Environment Agency continued support for Council's road program in valuable water meadow (Castlemeads and Oxleaze) at flood time. It is hoped that by responding, that someone will listen and try to restore some of Gloucester's flood plain, before the next major flood, which should be protected by law to stop further encroachments by Glos. City and County Councils.</p>
864	Individual	5.	C7.	Concern expressed re. British Waterway's total neglect of the Eastern Channel.
896	Individual	5., 8.	C3., W17.	Could arrange for the storage of soil, subsoil, hardcore etc. in suitable areas near the river to provide material for flood-banks which would reduce land-fill problems.

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898	Individual	5.	C6.	If global warming continues, sea-levels will rise and construction of dykes might become necessary (as the dutch engineers have done).
905	Individual	5.	C1.	Sympathetic improved coastal defences are necessary although they should not be viewed as an excuse for further development of urban sprawls.
925	Individual	5., 14.	C5., H2.	If areas of the coastline are eroding, a watching brief would enable any archaeological material to be identified before it is lost.
931	Individual	5., 7.	C4., P7.	Further consideration required of beneficial use of silt from port dredging work along face of saltings.

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947	Individual	5.	C3., C5	<p>Whilst the principle of defending residential property against the risk of flooding, has never been opposed - the principle of destroying other property to achieve that end continues to be opposed.</p> <p>It is recommended that SES looks at methodology of such schemes and advocates changes to the thinking behind such projects. These changes should be based on sensible cost-effective micro surgery rather than current massive structures (often unsightly, limited effect, expensive maintenance and create problems). By the year 2004, any agency responsible for the river must take a more sensitive role in tidal defence and start a policy of miniaturisation of defences geared to returning the river to its natural unspoilt habitat whilst still providing vital defence to residential property liable to tidal flood.</p> <p>Method of accurately recording tidal heights on site should be instigated for 7 year period to enable redesign of structures using landscape architects (independent of river agency).</p>
948	Individual	5.		<p>Desire by many that the policy of containment of the tideway is reversed and the river allowed to flood far greater areas than at present thereby providing a safe temporary storage for excessive tide water under storm conditions.</p>

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958	Individual	5.	M17., C8.	Any improvement of warning signs at the water's edge including coastal information warnings, directional signs, tidal information warnings and pollution information.
959	Individual	5.	M17.	Wider understanding of responsibilities for flood and surface drainage by local authorities.
968	North Somerset Council, Environment Group	5.	C1.	The work of the Coastal Cell Groups and the Shoreline Management Plan preparation process which has recently been undertaken should be updated with the recent strategy for the adoption of Management Units in order to deal with specific lengths of coast.
970	Caldicot and Wentlooge Internal Drainage Board	3., 5.	D8., C7.	Maintenance of the private farm ditches has been very lax of recent years and would benefit from Extensive Dredging Operations.