### THE ALDE AND ORE ASSOCIATION



The Association exists to preserve for the Public benefit the Alde, Ore and Butley Creek rivers and their banks from Shingle Street to their tidal limits and such of the land adjoining them or upstream as may be considered to affect them, together with the features of beauty and or historic or public interest in that area

### FRAMEWORK FOR THE FUTURE

### 1 Introduction

The Government is currently addressing policies for the future management of coastal areas including the three Suffolk Estuaries (Blyth, Alde and Ore and Deben). If the proposals originally published for the Blyth Estuary were to be applied to the Alde and Ore, this would result in the sea and river walls being left to deteriorate and ultimately breached. In this discussion paper the Alde and Ore Association, which represents all those who use and enjoy the Alde and Ore Estuary from landowners, residents, visitors, to those with commercial interests, sporting bodies including sailing and yacht clubs, wildfowlers, golf and fishing clubs, put forward proposals for a more environmentally and economically effective management scheme for the Alde and Ore Estuary.

### 2 Background

Our sea and river defences have rarely been breached. After the exceptional floods of 1953, the sea and river defences were raised and strengthened, and remain today of paramount importance to the economy of the Alde and Ore Estuary area. The estuary itself is designated for both national and international habitat and conservation protection. It is also used extensively both for leisure and business. It also includes the world famous Snape Maltings, the home of the Aldeburgh Music Festival, which has recently attracted extensive public and private funding in order that it may be become a national centre of excellence for the professional development of musicians.

The area surrounding the estuary is designated as an important Area of Outstanding Natural Beauty. It is also of exceptional importance for conservation purposes including RAMSAR, SPA, SSSI, SAC and ESA sites. Within the area we also have important conservation sites owned by the National Trust, RSPB and Suffolk Wildlife Trust respectively. While not highly populated, it provides a unique combination of scenery made up of river and marshland views, agricultural grazing and arable land and historic monuments which are visited by thousands of people annually who are attracted by the outstanding wildlife spectacle and the peace and tranquillity of the area.

### 3 Consequences of likely Government proposals

The consequences could include:

 an involuntary breach of the wall between the sea and the river at Slaughden which would dramatically increase volume and the speed of tidal flows in our rivers;

- the need to construct new walls to protect both Aldeburgh from the south and properties in Orford as otherwise hundreds of homes and businesses would be put at risk;
- most properties below 5 metres would become vulnerable to tidal surges;
- extensive flooding of most marsh lands and loss of many saltings;
- significant loss of habitats which are internationally designated by law as requiring protection.

We would also face significant economic costs which are not, under Government rules, taken into account in the Environment Agency's cost-benefit analyses of the case for improving our sea and river defences. For example the increased tidal flow would have adverse effects on employment in sailing, fishing and leisure while underground water supplies would become saline to the detriment of the public water supply which would lead to significant financial losses and reduction in employment in a leading pig, vegetable and cereal producing area.

### 4 This need not happen

Government policy is based on current estimates that in 100 years time sea levels will have risen to levels which suggest it would be uneconomic to defend large areas of the Suffolk's coast and tidal rivers. The approach also assumes that during this period new defences would have to be constructed at enormous cost rather than the current walls being maintained and that any new walls would have to be rebuilt after only 50 years.

While no exact science exists at present to confirm the extent or rate of change of predicted sea level rise over the next century, it is generally accepted that, for the next twenty to twenty-five years, no substantial increase is likely.

The real threat to the coastal lands for the immediate future is not a change in sea level but tidal surges breaching current and inadequately maintained defences. We believe the appropriate policy would therefore be to ensure that the current sea and river defences are properly maintained at least for the medium term (20-30 years) to the standard laid down following the 1953 floods. By then actual trends in sea level rise, storminess etc should become much clearer and provide a sounder basis for decisions which, if taken now, are likely to be irreversible.

However, Government policy is based on the view, confirmed following the June 2007 floods, that the limited funds available should give priority to protecting areas of high population density. This means that only a small part of the flood protection budget is allocated to the coastal region although there are signs, following huge opposition to the Government's plans in Norfolk and Suffolk that the Government may be re-thinking its policy. However, the latest figures available to the Association show that less than £5 million of the national budget is available to protect Suffolk's coasts and tidal rivers. Despite criticism by the National Audit Office the amount of funding devoted to maintenance is unbelievably less than a half per cent of the total budget.

The difficulties faced by the Environment Agency are illustrated by the long battle fought by Suffolk Coastal District Council and others to defend Felixstowe. If the Government

cannot without enormous difficulty find funds to defend Felixstowe how can it defend towns like Aldeburgh and Orford?

### 5 A different approach

We, like many others believe the 'assumptions' on which the current policy is based are unacceptable to the local community. In particular:

## (i) Basing a policy for action now on assumptions on what will happen in 100 years time

This assumption is not realistic, given that scientific knowledge is recognised to be incomplete and that new defence technologies may be developed over the next century. Independent scientific evidence indicates that for the next 20/25 years changes in sea level are containable by current defences within the Estuary (see latest Report to the Alde and Ore Association prepared by Professor Pye) Action needs therefore to be based on the short to medium term evidence-based likelihoods, while taking account of the possible longer term scenarios.

### (ii) The assumption that the threat to be dealt with is sea level rise

We recognise that sea levels are likely to rise over the next 100 years as a consequence of climate change and land movements following the last ice age. But the current threat arises from tidal surges where walls are not maintained sufficiently to prevent breaches. Once a sea or river wall is breached the consequences are often irreversible. Soundly maintained walls could however withstand surges, minimise the consequences of overtopping and would not require re-building.

## (iii) Managed retreat involves loss of agricultural land <u>and</u> will lead to an increase in saltings and coastal marshes

These are not opposite sides of the same coin. Saltings will only develop if the conditions relating to tidal volume, balance of ebb and flow, sources of material for deposition, alignment to coastal flows, dominant wind directions, and adjacent land configuration are of the right mix. High quality new saltings are not a given but only develop through a complex process which is not fully understood. Most of the so called marshes adjacent to the Alde and Ore, which are in fact grazing and arable land, are below low tide level and, should their defences fail, would be more likely to become permanently inundated mud basins and would not develop into saltings useful for flood protection, grazing and as wild life habitats. However we recognise there may be specific areas, not yet identified by the Environment Agency, where tidal exchange schemes could both create new habitats as required by EU law and help to preserve the broad configuration of our rivers.

Managed retreat presents other issues. While giving up agricultural land to the sea, or converting it into marsh or nature reserves has been considered appropriate national policy over the last ten years, this is looking increasingly questionable against the background of the global uncertainties of food supplies and rising food prices. We also have to bear in mind that the area surrounding our river contains many important historical sites which would need to be the subject of further archaeological surveys before defences could be abandoned. Similarly, as elsewhere in the country, it is likely that even greater expenditure would be needed to maintain sewerage outlets to acceptable standards.

## (iv) The assumption that land, unless occupied by relatively dense housing, should be yielded to the sea

While we accept that the forces leading to coastal erosion cannot be contained at every point along all our coasts and tidal rivers, the Government should take account in its short and medium term policies of the economic, social and environmental values of an area weighed against the cost of maintaining defences.

Considerations for the Alde and Ore Estuary should include:

- how much land would be lost the Dutch take the view that protection is important and considerations affecting the East of England are similar to those of the Netherlands;
- the pollution of the aquifer system;
- designated uses of the surrounding land area particularly wild life habitats;
- agricultural and commercial implications;
- public access and rights of way;
- the effects on tidal flow within the Estuary;
- property including major historical sites;
- eligibility for funding from the European Union, the regional flood defence levy or other local sources where projects fail to meet national (FDGIA) criteria

## (v) There is an implicit assumption that funding and work on defences can only be undertaken by the Government and should not involve local interested businesses, groups and individuals

We believe local communities should be more closely involved in decisions to fund sea and river defences and support the view recently expressed by the Minister for Eastern England that the Government should not go ahead with proposals unless they have the support of the local community. We, like the Association of British Insurers and our MP, John Gummer, also believe it is important to develop a longer term investment strategy and then determine the funds required and available from national <u>and</u> local sources. In the case of the Alde and Ore Estuary we are not talking about the loss of a "marginal" amount of land as suggested by DEFRA Ministers but "huge swathes of land" surrounding our estuary.

## (vi) There appears to be an assumption that if a particular river defences are not maintained and a breach results, there would be no need for further expenditure

In the case of the Alde and Ore major expenditure on new defences would be required adjacent to population centres such as Aldeburgh and Orford to protect low lying areas of close housing, businesses and shops. This would cost 20 or more times than basic maintenance.

### 6 Proposed framework

Taking account of the difficulty the Government is finding of identifying generic assumptions relevant to all coastal areas, we have identified a simpler and different approach based on the scientific evidence (Report by Professor Pye April 2008) that no significant changes in sea level are expected over the next 20/25 years.

We propose a three pronged approach;

# (i) The government should revisit its budget allocation for coastal defences including the amounts local authorities are permitted to raise through the local regional flood defence levy

We recognise that the EA cannot fund all high priority work. But the breaches which are now occurring and the delayed response times in making repairs leads to significantly greater recovery costs than more timely repairs. The Government therefore needs to increase the funds available from national and local sources to finance flood defence expenditure. We believe the Agency needs to move from a policy of effectively only 'firefighting" to a 'stitch in time' policy with the help and support of the local community. The 'cap' on expenditure financed through the regional flood defence levy should be removed with effect from 2009-2010.

## (ii) Policies should be based on the evidence for the short to medium term and not based only on the 100 year view

Where scientific evidence predicts no real change is likely for at least 20 years, the defences should be maintained at the very least to the post-1953 standards. Longer term changes should not be agreed until there is irrefutable evidence increases in the rate of sea level rise makes them unavoidable. The position should be reviewed in, say, 15 years time. By then developments in scientific understanding and technologies may have advanced considerably and decisions can be made based on knowledge built up over the intervening years. The economy of an area and any changes which affect the value of the estuary can also then be reviewed.

## (iii) Systems where public and private interests can collaborate should be built with partnerships to organise and maintain defences

While the Government must have a role to play at the strategic level in coastal and river defences, local communities are stakeholders and know and understand local conditions and their importance to the local community's well being and the local economy. Given these coinciding interests, maintaining or adjusting defences, could be achieved by the parties working in a private-public partnership. We propose a pilot project to test this approach.

### 7 The Alde and Ore Estuary

Even without a significant and much needed change in the level of Government expenditure, the Alde and Ore Estuary provides the basis to test a new approach to coastal management based on foreseeable sea and surge risks and a changed approach to maintaining existing defences.

Our best guess-estimate is that the economic value of the Alde and Ore Estuary is now about £25 million a year though many of us think this is far too low a figure. We have derived this figure from a survey sponsored by the Alde and Ore Association and others (the Friends of the Rivers study) in 2004. It includes the value of wages in agricultural production, businesses based on river activities, and leisure and tourism attracted by the estuary.

But it excludes the value of crops and the gross output of some £7 million of ten key employers who see the estuary as important to their business. Since then there has been a dramatic increase in people visiting the area, particularly at weekends. This is reflected, for example, in the growth of the music and retail centre at Snape Maltings as a business from just over £4 million in 2001 to about £8 million in 2007 and a dramatic increase in the value of property which was not taken into account in the original survey.

In addition the value of the underground aquifers has to be added to the original calculation, the value of the irrigated crops actually produced, which would not be possible if the land became salinated. Further the value of land for food production, housing and leisure as well as the value and density of property has increased significantly. At peak times the Lower Alde area can account for up to 50 per cent of the nation's potato production. The loss of jobs in the agricultural industry if farmland surrounding the Alde and Ore were lost and salinated would have a major effect on local employment.

We consider a new economic survey is required before any decision is taken to abandon any major part of our coastal and river defences and that it is unacceptable to base decisions on DEFRA guidance. If neither the Government nor the Environment Agency is prepared to undertake such a survey we believe it will need to be commissioned by the local community or their representatives.

As noted above, the Alde and Ore Estuary is a very significant area among the United Kingdom's areas of special biodiversity. It is subject to a large range of habitat and environmental regulations. It is an estuary which has been managed by man for over 600 years and valuable habitats have developed alongside our rivers. Letting the walls go now would seriously damage and change the dynamics of well established eco systems. Clearly the position will need to be reviewed at regular intervals over the next 100 or so years. But the advice of our specialist adviser (Professor Pye) is that with appropriate maintenance we can maintain broadly the same broad configuration of our rivers for at least 20 to 50 years.

Since 1953 the walls have not been seriously breached and only occasionally overtopped. Gradual sea level rise is less of a concern in the reasonably foreseeable future than the damage inflicted by increased wave action from more frequent surge tides which will hasten a breach if the defences are not maintained. Breaches and destruction of the Estuary's current configuration is much more likely to occur through lack of maintenance unless there is an exceptional storm surge breaching the sea wall at Slaughden. All the walls in the Alde & Ore estuary except those few that show obvious signs of neglect withstood the November 2007 surge with ease.

The fact that the river walls withstood the November 2007 surge, and that the small amount of overtopping which occurred did not seriously undermine our banks, demonstrated that the walls are of sound construction. Regular maintenance, not radical reconstruction, is all that is needed for some time ahead. North Sea surges have

historically been the much bigger risk to East Coast defences than sea level change. Resilient defences need to be maintained against these surges.

The expenditure on river defences and in replenishing shingle on the seaward side of the Alde estuary between Slaughden and Martello, including routine maintenance in 2007-08 was £190,000 and will be around £160,000 in 2008-09. These are tiny figures compared to the income generated annually by local businesses and the potential economic and environmental costs if our present defences were to be abandoned.

Taking the evidence from the river wall surveys conducted by the Association's River Defence Committee (a group of volunteers who compile a much valued annual report for the Environmental Agency of areas in real need of maintenance) our best present guess is that expenditure on areas in need of immediate remedial work would cost no more than £250,000. (This figure excludes any further expenditure required to recharge the beach at Slaughden and continuing work on sluices paid for through drainage charges.) We will be seeking to obtain more accurate estimates following the Environment's Agency's Crest Level Survey which was originally planned for this summer. While these repairs may be tackled over a number of years, a concerted 5 year programme to bring poorly protected areas up to a serviceable level is likely to cost significantly less in the long run than the current policy of 'fire-fighting'.

The current EA practice of dealing with deteriorated areas once they have become large tasks (fire-fighting) would not be as cost effective as a planned programme of repairs including those undertaken by landowners with land adjoining our rivers. Following the development of the local protocol for undertaking repairs in river walls we have agreed a test approach along one stretch of the River Alde with the Environment Agency.

The approach to responsibilities for, and involvement with, coastal and flood defences can be changed. Up to now the burden of the cost of maintaining coastal and estuary defences has fallen mainly on the national government's budget although land owners contribute through the Internal Drainage Board Levy and the local community through the Regional Flood Defence Levy. The legislation and requirements associated with repairing walls have both prevented and deterred landowners from doing much on their own lands. Now, however, the EA are in consultation with landowners and farmers and have developed a draft protocol which should, if finally agreed, allow land owners to maintain walls undertaking minor repairs, without changing the nature of the defences so as to affect the natural habitats associated with the existing land/water/defence configuration. Businesses and property owners bordering defended areas are becoming increasingly aware that it is in their own interests to contribute to the defence of our river walls and that the Government should not insist on the withdrawal of maintenance on the grounds that it cannot be funded from central sources.

The Environment Agency advise us that they expect to complete a further Government funded study on the future management of the Alde and Ore Estuary later this year. This will now include the future management of the coastline between Thorpeness and Hollesley. We cannot predict its conclusions, but it is likely to pay much attention to the stretch between Slaughden and the Martello Tower. Here the separation of sea and river is at its narrowest and without doubt an involuntary breach could have a catastrophic effect on the town of Aldeburgh, quite apart from radically altering the dynamics of the Estuary, its use and unique habitats.

### 8 Our proposition – to pilot "partnership management" of the estuary's defences

We believe the Alde and Ore Estuary represents an ideal place to undertake a pilot private-public partnership to test a new more co-operative approach between Government and the local community. This approach should be developed on the basis that:

- EA expenditure should at the minimum meet repairs of areas where an involuntary breach might occur;
- landowners and occupiers should be able to carry out minor repairs, which over time, should lead to less pressure for major repair work;
- additional and new funding sources should be identified and a system set up to ensure costs are met appropriately and with the support of the local community;
- our River Defence Committee's surveys of the state of our river walls, which
  have greatly assisted the Environment Agency in prioritising maintenance
  work, should be extended to include alerting landowners to areas where
  early and small repair work can help to avoid erosion.

We think such an arrangement could continue for 15 to 20 years and that the position should then be reviewed taking account of new data on sea level trends, workings of coastal forces, new technologies for sea defence, and longer term experience of managed retreat in areas where it has already taken place.

To set up the pilot, arrangements for an agreement on occupier led repairs needs either for the national Draft Protocol to be formally agreed with the CLA and others or for the draft local version for the Alde and Ore, prepared by the Environment Agency's Anglian (Eastern) Region, to be agreed with the Alde and Ore Association and other key stakeholders. In particular we need to reach agreement on standards of maintenance which as the minimum should be standards established after the 1953 floods.

#### 9 Conclusions

- The importance of coastal defence is no less now than it was 40 years ago. The Government should review the funding available locally and nationally for coastal protection. Government should also recognise that local needs vary and that they should not seek to limit amounts raised from the regional flood defence levy or through private-public partnerships agreed between interested parties at the local level.
- 2 Estuarine flood management should be based on short to medium term strategies bearing in mind the longer term possibilities not determined solely on the basis of what 'experts' predict might happen in 100 years time.
- 3 River and coastal defence should be undertaken in local partnerships within a well thought out and agreed framework developed in consultation with local communities.

We consider the Environment Agency should discuss the proposals set out in this paper and the findings of their consultants' reports with representatives of the local community <a href="mailto:before">before</a> announcing proposals for the future flood management strategy the Alde and Ore Estuary as recommended in our earlier submission to the Agency. Recent experience has shown, particularly in the case of the Blyth and Norfolk Broads villages, that a more open consultative approach is needed if the Agency's flood management strategies are to secure local support.

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### References

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