

791

PLANNING GUIDANCE (WALES)
TECHNICAL ADVICE NOTE (WALES) 14

COASTAL PLANNING



Welsh Office



£2.50

March 1998

This document is one of a series of Technical Advice Notes (Wales) (TANs) which supplement "Planning Guidance (Wales): Planning Policy".

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Further copies of this note are available from:

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01222 395548 Fax 01222 384347

ISBN 0 7504 2279 3

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First Published 1998



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Introduction

1. This Technical Advice Note (Wales) (TAN) should be read in conjunction with 'Planning Guidance (Wales): Planning Policy'. Planning Guidance, Technical Advice Notes and circulars should be taken into account by local planning authorities in Wales in the preparation of development plans. They may be material to decisions on individual planning applications and will be taken into account by the Secretary of State and his Inspectors in the determination of called-in planning applications and appeals.
2. Documents listed in the Reference column in the margin provide information which should be read in conjunction with the TAN.

The Coastal Zone

3. Generally the coastal zone is an area of land and adjacent sea that are considered to be mutually interdependent. It is a complex and dynamic zone. The physical processes which together produce the beaches, sand dunes, mudflats, cliffs and rocky shores can be defined as land, intertidal and subtidal, whilst littoral and sublittoral zones are categorisations of biological criteria relating to the influence of maritime conditions. Legal criteria such as land, foreshore and seabed definitions reflect man's use of the coastal zone (Figure 1 illustrates this complexity in a diagrammatic form).
4. It is for each local planning authority to consider and define the most appropriate coastal zone in its area. Because the boundaries of local authorities may not equate with coastal features and processes, this should be done in consultation with neighbouring authorities and in the knowledge that the overall limits of the coastal zone are determined by the geographical extent of coastal physical processes and human activities related to the coast. For land-use planning purposes the seaward limit of the coastal zone is generally mean low water mark, but between high and low water mark the planning system usually needs to operate in tandem with a range of sectoral controls over coastal and marine development.
5. Decisions on development proposals below low water mark are generally outside the scope of the planning system, and instead are regulated according to the type of activity. Examples include aggregates extraction, which at present is subject to the non-statutory Government View procedure, and licences for oil and gas, which are issued by the Department of Trade and Industry. Nevertheless, it is vital that planning authorities should recognise and take into account the significance of physical processes at the coast which inevitably transcend these legal boundaries, as well as considering the changes that may have effects on other parts of this dynamic system. In this context, it is important to recognise that on-shore development can often have an impact off-shore: this is particularly so adjacent to a candidate marine Special Area of Conservation (SAC). With these considerations in mind, it may be appropriate to define a maritime zone which includes an "area of influence" off-shore, as well as a coastal zone on shore.

Reference

'Planning Guidance (Wales): Planning Policy', paragraphs 141 to 146

*Rendel
Geotechnics,
'Coastal Planning
and Management:
A Review', HMSO,
London, 1993*

*Countryside
Council for Wales,
'Seas, Shores and
Coastal Areas',
1996*

*'Food and
Environmental
Protection Act'
(FEPA), 1985*

*Ministry of
Agriculture, Food
and Fisheries,
'Controls Over the
Deposit of Materials
at Sea and Approval
of Oil Dispersants',
FEPA, 1985, Part II*

*'Petroleum
(Production)
(Landward Areas)
Regulations', 1991*

*'Petroleum
(Production)
(Seaward Areas)
Regulations', 1988*

*'Petroleum
(Production)
(Seaward Areas)
(Amendment)'
Regulations, 1990*

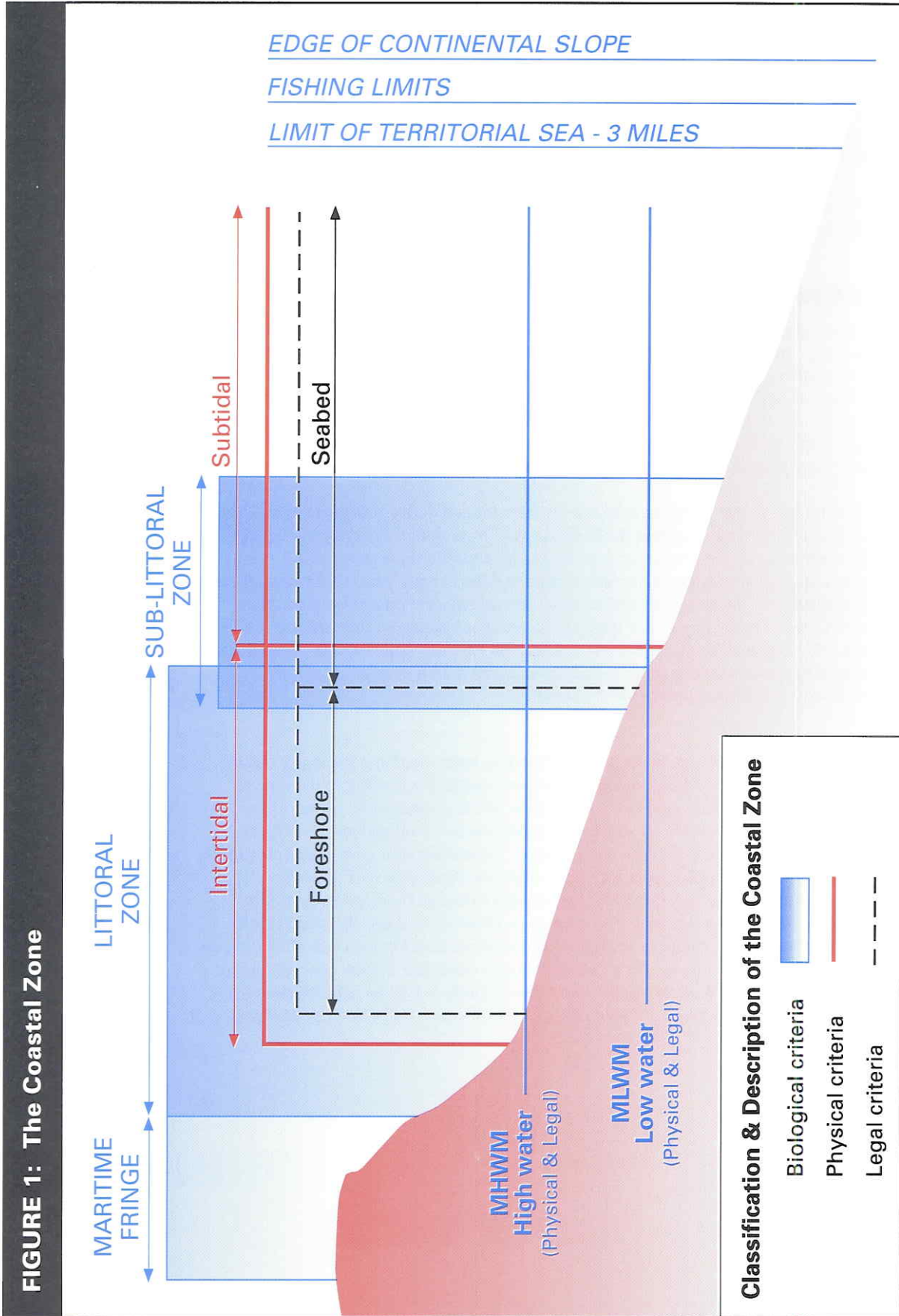


FIGURE 1: The Coastal Zone

6. Local planning authorities need to be aware of coastal issues at two scales - the site and its immediate environs, and in terms of the wider setting. For planning purposes along open stretches of coast, the geographical extent of the influence of physical processes affecting the coastline can be delineated with some certainty by sediment cells or sub-cells (Figure 2). In estuaries, the upstream extent of the tidal reach is an important boundary.

7. Physical processes and ground conditions at the coast may be essential for creating and maintaining conservation and recreation sites and features. Interference with these processes may have consequences for the overall balance of the physical system, which may take some time to become apparent; and whilst it is incumbent upon the developer to demonstrate that a site can be developed satisfactorily, having regard to those matters, local planning authorities still need to consider these potential effects when making planning decisions.

Key Issues

8. Planning considerations will vary depending on the nature of the coastline, but there are a number of specific issues in relation to the coastal zone that the planning system should address. These are, in terms of:

- i. Proposals for Development:
 - a. the nature of the ground conditions and physical processes, and the potential need for remedial and defence works;
 - b. likely effects on physical and biological processes along the coast;
 - c. the potential effects on mineral, water and conservation resources; as well as high-quality agricultural land; and
 - d. any potential visual impact from both land and sea.
- ii. Nature and Landscape Conservation:
 - a. the role of physical and biological processes in creating, maintaining and altering features of nature and landscape conservation value;
 - b. the effects of statutory and other nature and landscape conservation policies in the coastal zone, which may not always be contiguous with the low water mark; and
 - c. the importance of the integrity and special features of Marine Nature Reserves, candidate marine SACs and coastal SACs, Special Protection Areas and Ramsar sites. EC Directives relevant to planning in the coastal zone should always be borne in mind.

Reference

*HR Wallingford,
'Coastal
Management:
Mapping of
Littoral Cells',
Report SR328,
Wallingford, 1993*

*Technical Advice
Note (Wales),
'Development on
Unstable Land'*

*Technical Advice
Note (Wales) 5,
'Nature
Conservation and
Planning', 1996*

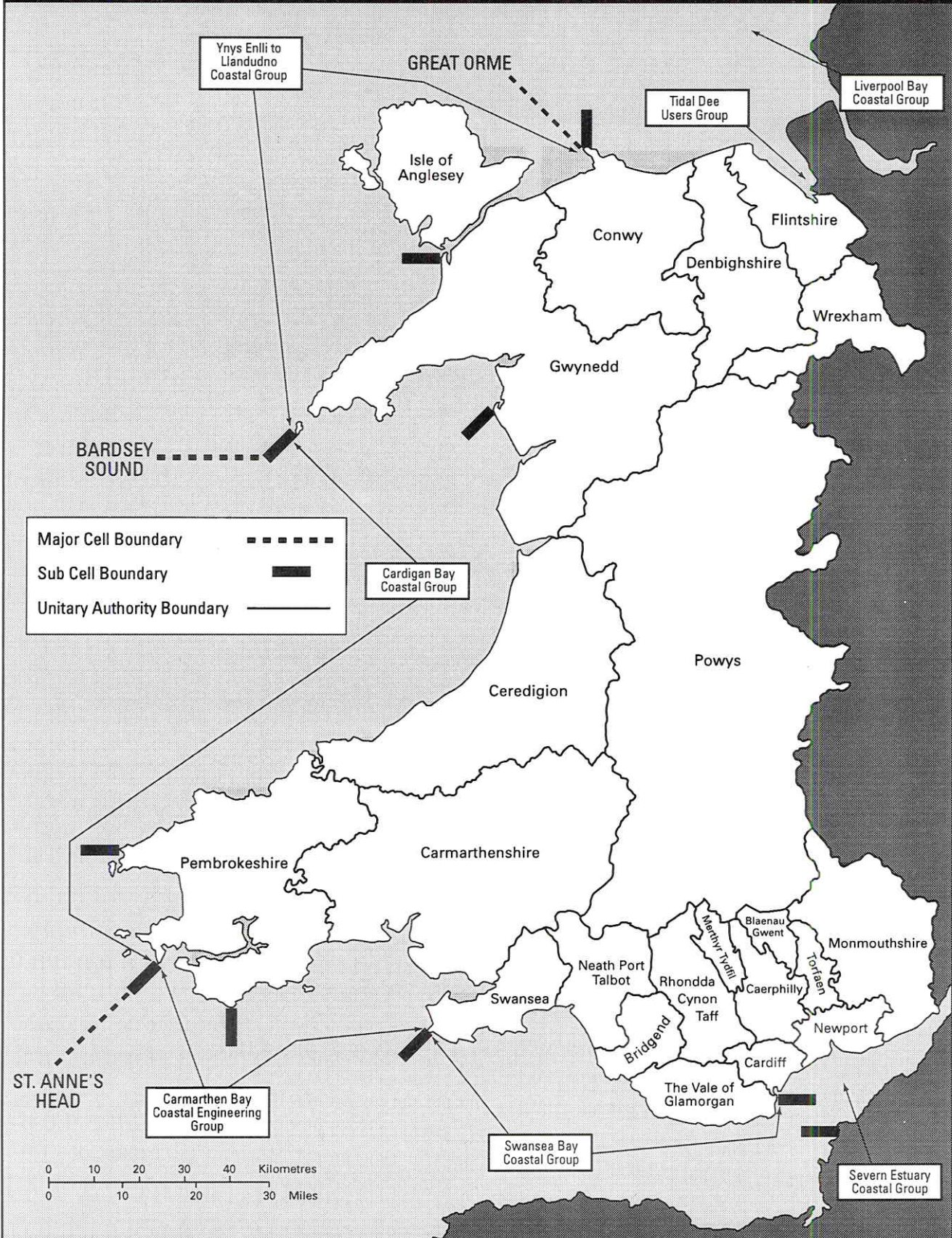
*76/160/EEC
Bathing water*

*79/409/EEC
Conservation of
Wild Birds*

*85/337/EEC
Assessment of
Environmental
Effects*

*91/271/EEC
Urban Waste Water
Treatment*

FIGURE 2: Boundaries of Major Sediment Cells



Source: (After H.R. Wallingford, 1993)

Reference

iii. Recreation:

- a. the primary role of physical processes in creating, maintaining and altering recreation resources such as beaches and sand dunes;
- b. the effects of recreational facilities on the stability of coastal geomorphology.

*92/43/EEC
Conservation of
Natural Habitats
and of Wild Fauna
and Flora*

*Technical Advice
Note (Wales) 16,
'Sport and
Recreation'*

*Technical Advice
Note (Wales) 13,
'Tourism', 1997*

9. In addition, a series of more general issues will also need to be carefully considered in the coastal zone where these are directly related to the land-use aspects of any proposed development, or where there is a potential effect off-shore. These include, for example: waste disposal and pollution control; minerals extraction; energy resources; navigation; fisheries, and; coast defence and other engineering works.

*Technical Advice
Note (Wales) 8,
'Renewable
Energy', 1996*

10. Some coast-specific considerations will need to be incorporated into the planning framework by local planning authorities. These include:

i. on-shore:

- a. the risks to any form of development associated with the physical processes and problem ground conditions;
- b. the likely impact of any development on the geomorphological processes and features, and on the important features of the littoral and sub-littoral zones;

*Rendel Geotechnics,
'Coastal Planning
and Management:
A Review of Earth
Science Information
Needs', HMSO,
1995*

ii. off-shore, in the intertidal zone, and the maritime fringe, the sediment budget⁽¹⁾ of the physical system; and

*Rendel Geotechnics,
'Earth Science
Information Needs
for Sustainable
Coastal Planning
and Management',
HMSO, 1995*

iii. the sensitivity of the overall coastal environment to natural change or human influences.

Consideration of these issues will allow local planning authorities to reflect variations in physical and biological conditions along their stretches of coastline instead of adopting a blanket approach to coastal planning. It will also enable them to consider the effects, including cumulative effects, of development proposals upon sites of nature and landscape conservation interest.

*'Planning Guidance
(Wales): Planning
Policy', 1996*

*Technical Advice
Note (Wales) 5,
'Nature
Conservation and
Planning', 1996.*

⁽¹⁾ The amount of sediment which enters and leaves a defined area of the coastal zone. The development of a fully quantified budget will usually be impractical, but it should be possible to gain a general indication of the nature and relative significance of sediment movement in relation to coastal features, thus enabling an overall impression about erosion and accretion along the coastline to be formed.

11. Coastal areas likely to be suitable for development, and those subject to significant constraints or considered unsuitable should be defined. Development plan policies should not provide for development on the coast which does not require a coastal location. It is also important to recognise that in areas designated for nature conservation purposes, or for their natural or historic landscapes, development should be limited; and that, in any case, opportunities for development on the coast may be limited by physical circumstances, such as risk of flooding, erosion and land instability. The degree of risk involved will have to be carefully considered and policies will specifically be needed to control or restrict development in: low-lying coastal areas; on land close to eroding cliffs or other eroding coastlines, and; on land in coastal areas subject to instability. If there is insufficient information to allow definition, the onus rests on the developer to provide sufficient and appropriate information to demonstrate that proposed sites can be safely developed without significant adverse effects. Figure 3 gives a summary of general guidance, and indicates the types of approach that may be appropriate for most stretches of coastline.

Planning the Coastal Zone

12. When preparing the development plan the local planning authority should:

- undertake, in consultation with the Countryside Council for Wales and the Environment Agency, a general assessment of coastal physical and biological conditions, concentrating on risk, sediment budgets and sensitivity issues (Figure 4);
- identify the key planning issues that need to be addressed;
- make effective use of information collected in respect of any:
 - shoreline management plan (Annex A, and Figure 5);
 - marine SAC management plan;
 - Local Environment Agency Plan (LEAP); or
 - coastal zone management plan; recognise the aims and policies of such plans;
- and, consider the scope for either producing a complementary framework to facilitate implementation of such plans and aid consistent decision-making or, particularly with a coastal zone management plan which has achieved general consensus through a process of consultation and discussion, for issuing supplementary planning guidance directly linked to the development plan to achieve the same ends;
- utilise information from the Welsh Office's Coastal Defence Survey (Annex B) when appropriate.

Reference

Technical Advice Note (Wales), 'Development on Unstable Land'

Technical Advice Note (Wales) 15, 'Development and Flood Risk'

Conservation (Natural Habitats, & c.) Regulations, 1994, (the Habitats Regulations), SI No 1994/2716

Department of the Environment/ Welsh Office, 'A Guide to the Conservation (Natural Habitats & c.) Regulations', 1994

'Strategy for Flood and Coastal Defence in England and Wales', MAFF/ Welsh Office, 1993

'Shoreline Management Plans: A guide for coastal defence authorities', MAFF/ Welsh Office/ Environment Agency, 1995

Department of the Environment, 'Coastal Zone Management: Towards Best Practice', 1996

FIGURE 3: Summary of an approach to coastal planning which may be appropriate for selected settings

Settings	Development Plan	Development Control
<ul style="list-style-type: none"> • rapidly eroding cliffs • actively unstable slopes • unprotected low lying areas • natural coastal defences (e.g. sand dunes) • very high to high sensitivity coasts 	<p>Areas least suited to development due to physical conditions. Development plan proposals subject to major constraints.</p>	<p>If development is considered it should be preceded by a detailed investigation, full risk assessment and/or environmental study. Many planning applications in these areas may have to be refused on the basis of potential physical problems.</p>
<ul style="list-style-type: none"> • eroding cliffs • potentially unstable slopes • low lying areas with low standard of sea defences • sand dunes • saltmarsh areas • foreshores in important sediment transport zones • high to moderate sensitivity coasts 	<p>Areas likely to be subject to significant constraints due to physical conditions. Development plan proposals should identify and take account of the nature of potential problems and address the requirements for suitable coastal defences.</p>	<p>A site reconnaissance study will need to be followed by detailed site investigation, including a risk assessment and/or environmental study, prior to lodging a planning application.</p>
<ul style="list-style-type: none"> • areas behind eroding cliffs • problem ground conditions • estuaries • foreshores 	<p>Areas which may or may not be suitable for development but investigations and monitoring may be required before any development plan proposals are made.</p>	<p>Areas need to be investigated and monitored to determine risks, sediment budget, or sensitivity. Development should be avoided unless adequate evidence of suitable conditions is provided.</p>

Note: The suitability for development of a particular stretch of coast will also reflect conservation value and the importance of erosion of a setting to the supply of sediment to the coastal zone.

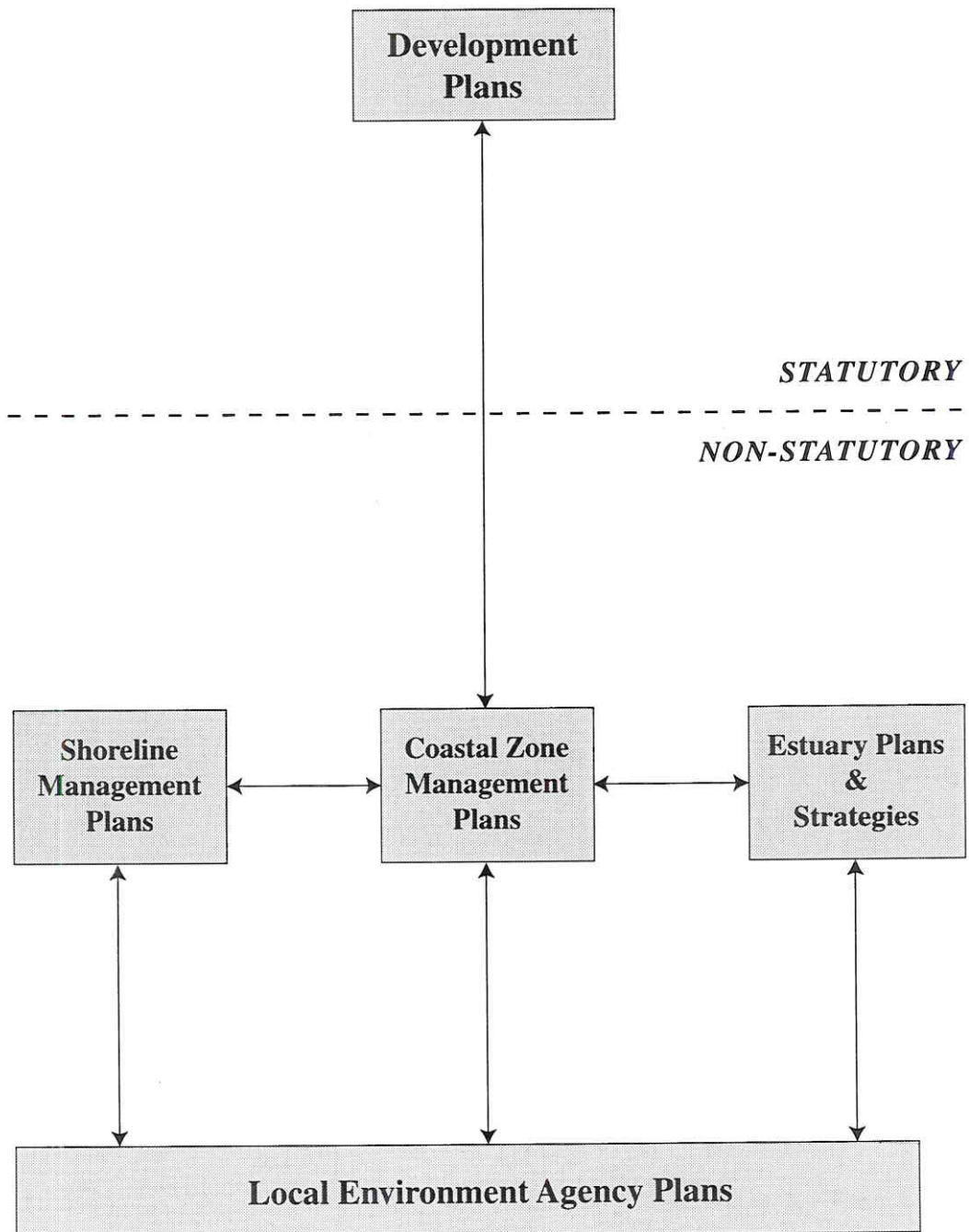
(Source: Rendel Geotechnics, 1995)

FIGURE 4: A selection of key issues associated with earth sciences in different coastal environments

Coastal Environment	Risk Issues	Sediment Budget Issues	Sensitivity Issues
Estuaries	<ul style="list-style-type: none"> • flooding • sedimentation • channel erosion • problem foundation conditions 	<ul style="list-style-type: none"> • sedimentation in watercourses, increased flood risk and navigation problems • disposal of dredgings on land or at sea • maintenance of natural coastal defences, e.g. mudflats and saltmarshes • effects of mineral extraction from the foreshore on erosion and flood risk • effects of mineral stockpiles on floodplain storage 	<ul style="list-style-type: none"> • creation and maintenance of conservation sites • effect of channel maintenance, flood defence and mineral extraction on conservation sites • effect of sea level rise on flood risk
Coastal Lowlands	<ul style="list-style-type: none"> • flooding 	<ul style="list-style-type: none"> • maintenance of natural coastal defences, e.g. mudflats, saltmarshes, beaches and dunes • maintenance of amenity beaches and sand dunes • effects of mineral extraction from the foreshore on erosion and flood risk 	<ul style="list-style-type: none"> • creation and maintenance of conservation sites • effects of flood defence on conservation sites • effect of sea level rise on flood risk
Coastal Cliffs	<ul style="list-style-type: none"> • landsliding • cliff recession 	<ul style="list-style-type: none"> • supply of sediment to natural coast defences, e.g. mudflats, saltmarshes, beaches, sand dunes • supply of sediment to amenity beaches and sand dunes • effects of mineral extractions on erosion and flood risk 	<ul style="list-style-type: none"> • creation of maintenance of conservation sites • effects of coast protection on conservation sites • effect of sea level rise on erosion rates • protection of high-quality agricultural land
Sand Dunes	<ul style="list-style-type: none"> • wind blown sand • flooding 	<ul style="list-style-type: none"> • supply of sediment and maintenance of natural coastal defences, e.g. beaches • supply of sediment and maintenance of amenity beaches and sand dunes • effects of mineral extraction on erosion and flood risk 	<ul style="list-style-type: none"> • creation and maintenance of conservation sites • effects of coast protection and mineral extraction on conservation sites • effects of sea level rise on erosion rates

Source: Rendel Geotechnics, 1995

FIGURE 5: Coastal Plans



Source: After MAFF 1995

13. Local planning authorities should ensure that they have adequate information and advice to decide land allocations in the coastal zone, and ensure proper consideration is given to physical and biological processes in the determination of planning applications, as well as the more familiar issues such as the quality and character of sites of nature conservation and landscape importance. They need to bear in mind, however, that the responsibility for demonstrating whether land is suitable for a particular purpose rests primarily with the developer. Figure 6 provides details of useful sources of information and advice about physical processes at the coast.

14. As well as considering landslides, ground conditions, erosion and flooding, local planning authorities must ensure co-ordination between land use planning and strategies for flood and coastal defence. Construction of sea defences often leads to increased pressure for development, but such defences only reduce the risk, and do not eliminate it. The development plan must therefore take coastal defence issues fully into account, and local planning authorities should also ensure that their development control decisions in the coastal zone pay sufficient regard to the defence strategy for the coastline.

Recreation

15. Development plan policies for development of marina and other facilities should be based on an assessment of the capacity of the local environment, both on land and off-shore, to accommodate water-based recreation. This should include consideration of potential risks from pollution at sea as well as arrangements on-shore for access and parking. Any associated development should be assessed separately, on its own merits, taking into account whether it requires a coastal location.

16. Development plan policies should encourage the re-use of disused docks as part of the regeneration of an area, whilst conserving and restoring landmarks and structures of special historic, architectural or archaeological interest. The use of poor quality agricultural land of low ecological value adjacent to tidal water could also provide opportunities for water-based developments.

17. The impact of on-shore recreation facilities in the form of clubhouses, jetties and slipways will need to be considered, particularly on the undeveloped coast. The loss of traditional boating-related facilities (e.g. boatyard and boathouses) to other uses that do not require a waterside location should normally be discouraged.

18. Public access to the coast should be a basic principle, unless it can be demonstrated that this is damaging to nature conservation impractical, or incompatible with adjoining land uses. This applies both to the developed and undeveloped coast. Whenever

Reference

Joint Nature Conservation Committee, 'Coasts and Seas of the United Kingdom' - Region 11 'The Western Approaches: Falmouth Bay to Kenfig'; Region 12 'Wales: Margam to Little Orme'; Region 13 'Northern Irish Sea', 1995

'Planning Guidance (Wales): Planning Policy', 1996

Technical Advice Note (Wales) 16, 'Sport and Recreation'

Technical Advice Note (Wales), 'Transport'

Technical Advice Note (Wales), 'Transport'

Technical Advice Note (Wales), 'Development of Contaminated Land'

FIGURE 6: Sources of Information and Advice		
Key Consideration	Information	Advice
Risks: Tidal Flooding	<ul style="list-style-type: none"> • Environment Agency S.105 maps • Environment Agency Sea Defence Survey • Welsh Office Coastal Defence Survey • TAN(W)15 Development and Flood Risk • Local Environment Agency Plans 	<ul style="list-style-type: none"> • Environment Agency • Coastal Cell Groups • Welsh Office
Risks: Landsliding and Cliff Recession	<ul style="list-style-type: none"> • Shoreline Management Plans • National Landslide Databank • British Geological Survey Maps • Aerial Photographs • TAN(W) Development on Unstable Land 	<ul style="list-style-type: none"> • Technical Services Department • Coastal Cell Groups • Welsh Office
Risks: Problem Ground Conditions	<ul style="list-style-type: none"> • British Geological Survey, Maps and Memoirs • British Geological Survey Borehole Records • Soil Survey Maps • Historical maps and records 	<ul style="list-style-type: none"> • British Geological Survey • Geotechnical Consultants • Technical Services Department
Sediment Budget	<ul style="list-style-type: none"> • Estuary Management Plans • Shoreline Management Plans • British Geological Survey Maps and Memoirs • Local Environment Agency Plans 	<ul style="list-style-type: none"> • Environment Agency • Coastal Cell Groups • Technical Services Department • Conservation Agencies
Sensitivity	<ul style="list-style-type: none"> • Shoreline Management Plans • Local Environment Agency Plans • Coastal Zone Management Plans • Conservation Agency maps and records 	<ul style="list-style-type: none"> • Environment Agency • Conservation Agencies • Coastal Fora • Coastal Cell Groups

Source: Rendel Geotechnics, 1995 (part)

Reference

appropriate, both new developments and regeneration schemes should seek to include, through planning obligations, public access as a positive feature of the development.

*Town and
Country Planning
Act 1990,
Section 106*

Heritage Coasts and Non Statutory Coastal Groupings

19. Heritage Coasts, non-statutory designations defined by local authorities in consultation with the Countryside Council for Wales, provide a management tool for balancing the requirements of conservation and access in the coastal zone. Primarily designated for the quality of their coastal landscape, they nevertheless serve to focus attention on the physical processes of land and sea, and consequent planning and management of the coastal zone.

*'Heritage Coasts -
A Guide for
Councillors and
Officers' (CCP475),
Countryside
Commission, 1995*

20. Regional conferences, Estuary Strategies or other groupings of local planning authorities and interested organisations can provide a means of improving knowledge of coastal processes, refining the key planning issues, and helping to co-ordinate policies for conservation, coastal defence and development in the coastal zone. The Coastal Defence Groups with the Welsh Office and other relevant bodies, support a Coastal Defence Forum which provide a mechanism for looking at the planning of coastal defences in their wider settings. The Secretary of State for Wales has now established a Welsh Coastal Forum which meets 3 times a year to provide advice on maritime themes and topics to aid policy formulation. Local authorities, statutory agencies and other organisations are encouraged to produce up-to-date and relevant coastal zone management plans, and should seek to foster close working relationships to ensure that consistent decisions are made about development and conservation on the coast.

Cancellation of Advice

21. Table 1 and Annexes 1, 2 and 3 of Planning Policy Guidance note 20 'Coastal Planning' are cancelled.

SHORELINE MANAGEMENT PLANS

A1. A Shoreline Management Plan (SMP) sets out a strategy for sustainable coastal defence within a sediment cell taking account of natural coastal processes and human and other environmental influences and needs. It should also set objectives for the future management of the shoreline.

Main Objectives of an SMP

A2. The main objectives in developing an SMP are to:

- improve understanding of the coastal processes within the sediment cell;
- predict the likely future evolution of the coast;
- identify all the assets within the area covered by the Plan which are likely to be affected by coastal change;
- identify the need for regional or site specific research and investigations;
- facilitate consultation between those bodies with an interest in the shoreline.

A3. The main objectives of a completed SMP are to:

- assess a range of strategic coastal defence options and agree a preferred approach;
- outline future requirements for monitoring, management of data and research related to the shoreline;
- inform the statutory planning process and related coastal zone planning;
- identify opportunities for maintaining and enhancing the natural coastal environment, taking account of any specific targets set by legislation or any locally set targets;
- set out arrangements for continued consultation with interested parties.

Issues to be considered

A4. Four key issues need to be addressed in the preparation of a Shoreline Management Plan. These are:

- coastal processes;
- coastal defences;
- land use and the human and built environment;
- the natural environment.

Annex B

COASTAL DEFENCE SURVEY - WALES

B1. The Coastal Defence Survey - Wales is an update and expansion of the Coast Protection Act 1949: Report of Survey (Wales) published by the Welsh Office in 1982.

B2. The database is in two parts. The first, the General Survey, comprises a continuous listing of the nature of the complete coastline of Wales, which identifies for each specified length:

- whether it is defended or undefended;
- where defended, the nature of the protection;
- whether the defences are classed as sea defence or coast protection;
- where undefended, the nature of the natural coastline;
- the landowner; body responsible for any defences;
- the land type and assets at risk; and
- the degree of exposure of the length of coastline.

B3. The lengths have been specified on the basis of their having reasonable consistent characteristics throughout, are defined by grid references at either end and have an individual code number to identify them. Where there are code numbers identifying equivalent lengths in either the Environment Agency Sea Defence Survey or the survey by Railtrack of their defences, these have been used as the basis for the codes in the Coastal Defence Survey to facilitate cross referencing.

B4. The second part of the database relates only to those defences in the first part which are classed as "Coast Protection", and provides information on their condition. In that respect it complements the Environment Agency Sea Defence survey.

B5. The specified lengths of coastline in the database are shown on a series of maps to aid the identification of their locations. Reports are being prepared to describe the work carried out and to summarise the results. The survey will be kept up to date regularly and will be expanded to include other data such as astronomic tidal and extreme sea levels, wave data, and appropriately summarised information from Shoreline Management Plans when these become available.