

*Chapter Six*

**WATER ENVIRONMENT**

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## WATER ENVIRONMENT

### INTRODUCTION

**6.01** The District has an extensive and varied water environment, consisting of:-

- (a) major chalk aquifers, which provide most of the District's public water supply;
- (b) lakes and ponds;
- (c) the River Dour and the lower reaches of the River Stour, together with their tributaries;
- (d) a network of dykes and drainage ditches in the north of the District; and
- (e) the English Channel, which forms one third (32 km. or 20 miles) of the District's administrative boundary.

### Existing Situation

**6.02** In East Kent, droughts have resulted in water resource shortages, hosepipe and groundwater extraction bans, and caused harm to river environments, including wildlife. Some coastal areas are also at risk from salt water tainting, where groundwater levels are very low. Nevertheless, Kent is self-sufficient in water supply and, with leakage control and waste reduction, could continue to be so. However, water imported from the rest of the Southern Region can be secured and it is the policy of the Environment Agency to do so should self-sufficiency damage the water environment.

**6.03** The quality of some groundwater, rivers and coastal bathing waters in the District has been affected by various sources of pollution. Pesticide contamination of groundwater has been identified as a problem in the south of the District. Landfill and colliery spoil sites could also pose a problem if contaminants were to leach into the groundwater. Leaking cesspools are common, even in water gathering areas.

**6.04** The River Dour is of the highest water quality (Class 1a) and able to support fish, such as trout. The Environment Agency is currently investigating the impact of recent low water levels on the river's rich botanical and invertebrate life. The quality of the River Stour and its tributaries varies from Good to Fair. Upstream from Sandwich, the quality of the Stour is Good. Its Fair rating downstream from Sandwich is a result of wastewater effluent and effluent from the pharmaceutical industry.

**6.05** The quality of coastal bathing waters has been historically poor as a result of both private and public sewage effluent discharges. However, since waste water treatment works were completed at Sandwich Bay, there has been a steady improvement of bathing water quality. All three beaches at the coastal bathing water sites at Sandwich Bay, Deal Castle and St Margaret's Bay met the standards set by the European Union Bathing Waters Directive in the 1996 bathing season. To date, no beach in the District has achieved the European Blue Flag Award, which requires criteria additional to bathing water quality to be met. Further measures are in hand to address river and coastal pollution, and these are considered in paragraphs 6.18-19.

### Applying the Plan's Aims and Objectives

**6.06** Water is a vital resource. It needs careful management if it is not to be degraded, over-exploited or threaten life and property. This reflects the sustainable use of water, in accordance with Aim 1 (Objectives 2 and 4). An attractive water environment is also an economic asset, furthering Aim 2, Objective 21. Water recreation and accessibility (Aim 3) are considered in Chapter 12.

## Water Environment Strategy

**6.07** Based on the existing situation and Aims 1 and 2, the Plan's Water Environment Strategy will seek to:-

- (a) contain, reduce and, if possible, prevent water pollution;
- (b) direct development away from areas liable to flooding and coastal erosion;
- (c) support the most efficient use of water;
- (d) provide mains drainage throughout the District; and
- (e) wherever possible, protect and enhance the nature conservation, landscape and amenity value of the District's water environment.

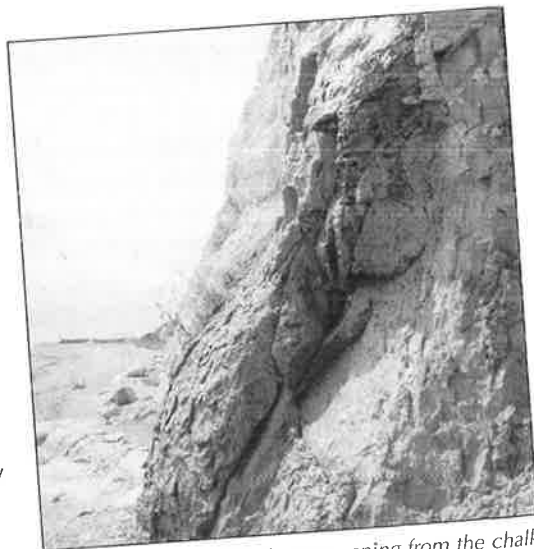
**6.08** The ability of the Plan to fully implement this Strategy is limited as, for example, pollution is not controlled by Town and Country Planning legislation. The Environment Agency has a duty to safeguard the water environment in general, while private water companies are responsible for water supply and wastewater treatment. Nevertheless, the Plan can directly influence the location of new development and water infrastructure plant. Support will be given to the statutory responsibilities of other bodies where this accords with the Strategy.

## SOURCES AND SUPPLY

### Groundwater and Surface Water

**6.09** Water, which soaks into the ground, is referred to as groundwater while that remaining on the ground is surface water. In the District, groundwater from the chalk makes up a high proportion of fresh water resources and so is vital to drinking water (its principal general use), industry, agriculture and maintaining river flows. Damage to groundwater resources may result from any of the following:-

- (a) physical disturbance of aquifers and groundwater flows, for example, through quarrying and road construction;
- (b) pollution, for example, from waste disposal, industrial activity and farming; and
- (c) over-abstraction.



*Groundwater seeping from the chalk*

**6.10** The Environment Agency has produced a National Groundwater Protection Policy, with which proposals for development should comply, and has defined 'Source Protection Zones' as a specific protective measure in addition to the general overall protection. Within Source Protection Zones, a distinction is made between several aquifer Zones. The most stringent restrictions will apply in areas designated Zone 1. Zone 1 and 2 aquifers, shown on the Proposals Map, identify major public water supply sources where certain types of development and uses of land are not normally permitted. Exceptionally, such uses may be permitted if the Environment Agency is satisfied that proposals include safeguards, such as containment and barrier systems, which will protect the aquifer and eliminate the risk of possible contamination. Activities which involve the disposal of liquid waste to land exclude specified wastes for agricultural benefit. These specified wastes are controlled separately by the Environment Agency and do not require planning permission.

**6.11** Groundwater and surface water are closely linked, as one feeds the other. Surface water can be a problem in areas where the ground is relatively impermeable, leading to a greater and more immediate run-off. Groundwater protection policies tend to direct development to such areas, which then affects natural surface water patterns. In particular, large impermeable areas, created by development or the

rationalisation of sewerage systems, may divert water away from a water catchment area and this may prevent the most efficient use of water resources. Consequently, developers will need to demonstrate that their proposals will be consistent with the broad objectives of the Environment Agency. In considering proposals, the Council will be advised by the Environment Agency. Policy WE1 expands upon Structure Plan Policies NR3 and NR4, which give general protection to groundwater and surface water resources.

### **Policy WE1**

**Within Groundwater Source Protection Zones, shown on the Proposals Map, the following will not be permitted in Zones 1 and 2 unless adequate safeguards against possible contamination are provided:-**

- (i) septic tanks, storage tanks containing hydrocarbons or any chemicals, or underground storage tanks;**
- (ii) proposals for development which may include activities which would pose a high risk of contamination unless surface water, foul or treated sewage effluent, or trade effluent can be directed out of the source protection zone;**
- (iii) proposals for the manufacture and use of organic chemicals, particularly chlorinated solvents;**
- (iv) oil pipelines;**
- (v) storm water overflows;**
- (vi) activities which involve the disposal of liquid waste to land;**

**In addition, the following will not be permitted in a Zone 1 unless adequate safeguards are provided:-**

- (vii) new graveyards or farm waste storage areas;**
- (viii) new foul or combined sewerage systems.**

### ***Environmental Appraisal***

*This policy supports the Objective of reducing pollution. No Objectives are adversely affected.*

### **Capacity and New Development**

**6.12** Southern Water Services Ltd and Folkestone and Dover Water Services Ltd are responsible for fresh water supply in the northern and southern part of the District, respectively. Structure Plan Policy NR1 requires local plans to consult the relevant water undertaker and the Environment Agency on proposals which are likely to have significant water supply implications.

**6.13** New development should be located where adequate water resources already exist or where new provision can be made without harming existing abstractions, river flows, water quality, fisheries, amenity or nature conservation. This approach supports the Environment Agency's regional strategy 'Sustaining Our Resources' and 'Kent Groundwater Management Policy'. The latter includes not increasing the annual level of abstraction from the Stour and, for parts of the Little Stour and the Dour, reducing the level. However, spare capacity is not, in itself, a justification for development. Proposals for development must be in an environmentally acceptable location. In applying Policy WE2, the Council will consult the Environment Agency and statutory water undertakers. Water supply requirements for the expansion of Aylesham are considered in Chapter 14.

## **Policy WE2**

**Development will not be permitted unless adequate water resources are available and their use would not have an adverse affect on the quality and yield of existing abstractions, amenity or nature conservation interests.**

### ***Environmental Appraisal***

*This policy supports the Objectives of protecting the countryside and using existing resources more efficiently before using fresh ones. No Objectives are adversely affected.*

**6.14** As a result of concern about over-abstraction and recent drought conditions, the need to better manage water resources for public supply has become an important issue. Measures to encourage the careful use of water and reduce wastage include demand management and leakage reduction. The Council expects such conservation measures to be optimised before the development or expansion of water infrastructure - such as reservoirs, which require planning permission - can be supported. Planning applications for new water supplies should be accompanied by water resource studies to demonstrate that this situation has been reached. Policy WE3 provides a stronger resource conservation emphasis than Structure Plan Policy NR2.

## **Policy WE3**

**Proposals for new public water supplies will not be permitted unless they are accompanied by studies to show that measures to use the existing water supply more efficiently have, where practicable, been introduced but an outstanding need remains.**

### ***Environmental Appraisal***

*This policy supports the Objectives of protecting the countryside and using existing resources more efficiently before exploiting new ones. No Objectives are adversely affected.*

## **Broad Oak Reservoir**

**6.15** A new reservoir, at Broad Oak in Canterbury District, was being promoted by Southern Water Services Ltd, Mid Kent Water plc and Folkestone and Dover Water Services Ltd. It would have created a major new water source to serve East Kent, including the District, into the next century. However, the decision to proceed with the scheme has now been deferred until after the Plan Period.

## **DRAINAGE AND WASTEWATER TREATMENT**

### **Soakaways**

**6.16** Directing run-off from roofs directly into the ground via soakaways helps replenish groundwater and reduces the burden on wastewater treatment works. The Council will expect that, wherever possible, soakaways are used in new development. The use of soakaways for other impermeable areas where water can become contaminated, such as car parks, will not be allowed. In some locations, soakaways via interceptors will be acceptable. A consent may be required from the Environment Agency for discharges to soakaways.

## **Policy WE4**

**Proposals for development will only be permitted if they include, where practicable, measures for the disposal of run-off from roofs to the ground via soakaways.**



## ***Environmental Appraisal***

*This policy supports the Objective of using existing resources more efficiently before exploiting new ones. No Objectives are adversely affected.*

### **Capacity and New Development**

**6.17** Southern Water Services Ltd is responsible for wastewater disposal in the District. Proposals for new development need to make provision for the disposal of wastewater and Structure Plan Policy NR1 requires the local planning authority to consult Southern Water Services Ltd and the Environment Agency on wastewater implications. However, as with water supply, spare capacity is not, in itself, a justification for development. Structure Plan Policy NR2 requires that new facilities must be environmentally acceptable. Infrastructure requirements for the expansion of Aylesham are considered in Chapter 14.

#### **Policy WE5**

##### **Development will not be permitted unless:-**

- (i) adequate means of wastewater disposal are available or can be provided; and**
- (ii) the provision of additional wastewater facilities would not harm water quality, amenity or nature conservation interests.**

## ***Environmental Appraisal***

*This policy supports the Objective of reducing pollution. No Objectives are adversely affected.*

### **New Treatment Facilities**

**6.18** A new wastewater treatment works at Broomfield Bank, west of Dover, will serve the Dover and Folkestone area. Another wastewater treatment works, to the north of Richborough in Thanet District, now serves the Deal and Sandwich areas. Southern Water Services Ltd is investigating the possibility of depositing sludge from these works at Betteshanger Colliery spoil tip. The depositing of sludge is a matter for the Waste Local Plan, prepared by the County Council. The District Council would support such a scheme provided there is no adverse impact on nature conservation interests, reedbed filtration is incorporated into the scheme, and the proposal is acceptable in amenity and transport terms. Pfizer Ltd has constructed a plant to deal with its own effluent. These developments should improve the bathing water quality of coastal waters, to meet current European Union standards.

**6.19** It is understood that Southern Water Services Ltd has no programme to extend mains drainage to the remaining unconnected rural parts of the District. The District Council is able to provide first time sewerage. A 20 year rolling programme was approved in 1989 and the first scheme at Hull Place, Sholden, has been completed. The Council is currently investigating ways of implementing the rest of this programme.

## **RIVERS, LAKES AND PONDS**

### **River Corridors**

**6.20** A river corridor includes the river, its banks and land close by, such as water meadows, marshes or other wetland areas. Main rivers refer to watercourses for which the Environment Agency has responsibility. The Environment Agency's consent is required for all development in, over or under a main river or within 8 metres (26 ft.) from the top of its banks. Where tidal stretches of river have a bund wall defence, the extent is 15



*The River Stour at Sandwich*

metres from the land-ward toe of the wall. Consent within the buffer zone is unlikely if the development would obstruct access for river maintenance or affect nature conservation interests.

**6.21** River corridors are very important for nature conservation and quiet recreation, as well as contributing to the landscape. Policy ENV11 of Kent Structure Plan sets out a policy of conserving and enhancing the environment within river corridors, including the landscape, water environment and wildlife habitats. Where consistent with these objectives the policy allows for the provision of public access and water-related recreation opportunities. Proposals will be judged against the general policies of this Plan together with Structure Plan Policy ENV11. Management aspects are covered in Chapter 5.

## **Moorings and Pontoons**

**6.22** Unauthorised moorings and pontoons are a particular problem on the River Stour. These structures are very visible and intrusive in the flat landscape surrounding Sandwich. They can harm historic environment and nature conservation interests. Noise, disturbance and access are also recognised problems. Consequently, the Council will only be prepared to permit new moorings within, or well related to, the built-up area of Sandwich. In addition, permission will only be granted if there is no conflict with historic environment, nature conservation, access and amenity interests. In cases of unauthorised moorings, the Council will take steps to secure their removal and, if necessary, take enforcement action. Water recreation is considered in Chapter 12.

### **Policy WE6**

**Moorings and pontoons will not be permitted in locations on the River Stour which are not well-related to the built-up area of Sandwich. In addition, permission will not be granted if they would harm historic environment, nature conservation, access and amenity interests.**

### ***Environmental Appraisal***

*This policy supports the Objectives of protecting the countryside and the historic environment. No Objectives are adversely affected*

## **Ponds and Lakes**

**6.23** According to the Pond Society's definition, ponds have an area less than 2 Ha. (5 acres) and are present for at least 4 months of the year. There is no formal definition of a lake but, for the purposes of this Plan, it is any permanent body of land-locked water of 2 Ha. or more. Both are important nature conservation and informal recreation resources. They are important features in the landscape and are amenities in their own right, providing variety in rural and urban areas. However, lakes and ponds can be threatened by proposals for development, pollution and changes in water tables. Consequently, they should be protected.



*Village pond, Worth*

### **Policy WE7**

**Development which would result in a loss in the quantity or quality of lake or pond water, or adversely affect the setting of a lake or pond, will not be permitted.**

## ***Environmental Appraisal***

*This policy supports the Objectives of protecting the countryside, open spaces and historic environment, and reducing pollution. No Objectives are adversely affected.*

### **RIVER AND TIDAL FLOODING**

**6.24** PPG20 (Coastal Planning) requires that land use policies seek to minimise development in areas at risk from flooding in order to protect life and property. This new requirement is reflected in Structure Plan Policy NR5. Circular 30/92 (Development and Flood Risk), which complements PPG20, requires that flood defence is taken into account, and that risks in the District and constraints on development are made explicit.

**6.25** PPG20 requires areas at risk from flooding to be shown on the Proposals Map. This information has been supplied by the Environment Agency. However, this is not to say that nearby low lying areas are not at risk from flooding. A distinction can be made among different types of flooding. Fluvial flooding is caused by rivers, while tidal flooding is caused by the sea. Some areas can be affected by fluvial and tidal flooding. The fluvial flood boundary is based on the estimated 1 in 100 year, or worst recorded flood. The tidal flood boundary is defined as the worst recorded flood (1953) or the 1 in 1,000 conjectural flood, whichever is the greater. The 1 in 1,000 flood is the most severe event and is therefore used to define the flood boundary. The estimated 1 in 1,000 year tidal flood level is 5.58 metres (18 ft. 7 ins.) above Ordnance Datum Newlyn (AOD) at year 2060. This level is based on still water. Tidal flooding will occur on low lying areas of land adjacent to the coastline and may be worsened by the effects of wave action, high winds and physical features, both natural and man-made.

**6.26** The acceptability of development at risk from flooding will be determined on a site by site basis, taking into account site specific considerations relevant to the flooding issue and in consultation with the Environment Agency. Theoretically, it is possible that a much wider area than shown on the Proposals Map could flood if, for example, river levels, tides and on-shore winds, higher than in 1953, came together. In addition, development carried out since 1953 will have affected flood patterns. Therefore, a precautionary approach is needed when considering development - especially residential - both in and close to the flood risk area. Proposals for all development in or close to an area liable to flooding should always include details of site levels.

**6.27** Those low lying parts of the District, which have been identified by the Environment Agency as at risk, include Sandwich and the northern part of Deal urban area. The Sandwich area is affected by both fluvial and tidal flooding, while the Deal area is at risk from tidal flooding. At Sandwich, the loop of the River Stour acts as a storage area for flood water. This helps protect the built up area of Sandwich from more frequent flooding. The Environment Agency is, therefore, concerned to ensure that development, including land-raising, within the loop does not interfere with the loop's flood defence role. Development within the loop will only be permitted if it does not lead to a loss of flood plain.

**6.28** Within areas liable to flooding, it is vital that new development is carefully designed and sited so that there is minimal risk to life, and it does not jeopardise the stability and continuity of flood defences or interfere with their maintenance and improvement. Risk to life is a particularly important consideration for residential development (which includes new dwellings, extensions, caravans used as temporary accommodation, conversions) and to employment premises. Significant residential development in areas at risk from tidal flooding will not be acceptable. Each case will have to be judged individually. The Environment Agency has indicated that it may oppose development in previously developed built up areas lying within an area at risk from tidal flooding. Any new dwellings which are permitted will have to be designed to ensure that no sleeping accommodation is at risk from flooding. To achieve this, the floor level of sleeping accommodation must be a minimum of 6.18 metres (20 ft. 1 in.) AOD, which includes a factor of safety to allow for wave action.

**6.29** The Council will consult the Environment Agency on all proposals for development considered to be in an area at risk from flooding or which would affect flood defences. In interpreting Policy WE8, the Council will be advised by the Environment Agency.



## Policy WE8

Building development and land raising will not be permitted in a fluvial flood plain unless developers can demonstrate that the development will not be at risk from flooding and that it will not impede flood flows or lead to a loss of flood storage. Development will not be permitted in an area at risk from tidal flooding unless:-

- (i) it does not harm the integrity of flood defences;
- (ii) it does not increase the risk of flooding at the application site or elsewhere;
- (iii) it would not result in significant new residential development. Holiday accommodation for occupation outside the months of May to August inclusive and any residential development permitted must be a minimum of two storeys high and no sleeping accommodation should be provided below 6.18 metres AOD. Proposals involving the conversion of all or part of an existing building to flats or other self-contained or sleeping accommodation must not include such accommodation below this level. Any other built development permitted must provide for escape for people in the event of a flood.

Proposals for development should include site levels and measures to ensure that surface water run-off discharged to a water course does not increase the risk of flooding elsewhere.

### *Environmental Appraisal*

*This policy has no direct relationship with any Objective. Indirectly, by limiting development in flood risk areas, the useful life of resources would be greater thereby supporting the Objective of minimising the amount of new resources used.*

## COASTAL WATERS

### Coastal Defence

**6.30** Coastal defence is a composite term covering flood/sea defence (measures taken against flood hazards) and coastal protection (measures taken against the erosion of the land and other encroachments of the sea). Coastal protection is concerned with the prevention of erosion and the damage that can be caused as the coastline retreats. Unlike sea defences, the absence of coastal protection measures will not lead to flooding. PPG20 requires land use policies to minimise development in areas at risk from land instability and erosion, and allows for managed retreat if sea defences are thought inappropriate.

**6.31** In the District, there are no known areas of unstable land, defined as large areas of land liable to sudden failure - although dramatic changes to the shingle bank between Sandown, Deal and Kingsdown can occur. Erosion, which is the gradual attrition of land by the sea, is a recognised occurrence along parts of the chalk cliffs between Kingsdown and Shepway District. The rate of erosion is considered very small, though it is characterised by occasional localised cliff-falls. The management of coastal processes is, therefore, very important.

**6.32** Responsibility for coastal protection is shared between the Council, under the terms of the Coast Protection Act 1949, and landowners, such as the Ministry of Defence,



*Coastal defences, Kingsdown*

the National Trust and Railtrack South. The Council is specifically responsible for the section of coast from Sandown Castle to the Kingsdown Rifle Range and St. Margaret's Bay. The Council, with grant aid from the former Ministry of Agriculture, Fisheries and Food (MAFF), has recently completed a major scheme to improve coastal defences between Deal Pier and Walmer, and at Kingsdown.

**6.33** Planning permission is required for coastal defence works as far as the low water mark. An Environmental Statement may also be required. Extensive coastal defence works can interrupt the natural transport of material along the coast, which, in turn, can cause problems elsewhere. Such works can also have great visual impact and may not be appropriate in areas renowned for their natural beauty. Provided there is no danger to life or severe economic implications for the District, managed retreat or a 'do nothing' strategy, where natural processes are allowed to take their course, are alternatives for such areas. Parts of the District's coast where this may be appropriate are the Heritage Coasts and Undeveloped Coast (see Chapter 5).

### **Policy WE9**

**Permission for coastal defence works will only be granted if:-**

- (i) the threat of coastal erosion is not increased; and**
- (ii) there is no harmful interruption of the process of transport and deposition along the coast.**

### ***Environmental Appraisal***

*No Objectives are adversely affected.*

## **MANAGEMENT PLANS**

**6.34** The Department of the Environment, Food and Rural Affairs (DEFRA) is encouraging cooperation among local authorities, other agencies and interest groups to produce coastal management plans. A strategy to deal with issues along the Kent coast is being prepared by the County Council, District Councils and other interested parties. DEFRA is promoting the preparation of shoreline management plans, two of which affect this District, and water level management plans, while English Nature is encouraging the preparation of Estuary Management Plans. As a priority, the Environment Agency intends to prepare a water level management plan for the Sandwich Bay/Pegwell Bay Ramsar site, Special Protection Area and Candidate Special Area for Conservation. Such plans will help resolve potential conflicts of the many interests in coastal areas, including nature conservation, recreation, fisheries and port activities. The Council supports such management initiatives.

