Re-typed from original faxed message from Southern Water Authority

SOUTHERN WATER KENT DIVISION FOLKESTONE SEWAGE DISPOSAL EFFECT BY EUROTUNNEL DEVELOPMENT AT CHERITON

Sewerage

Present Situation

The existing development in this area drains to a combined relief sewer of 1200 mm diameter (48") which was constructed in the 1930's and extended in the 1950's.

Generally this sewer can accommodate a full bore flow of 3960 1/sec although a section laid to a flatter gradient reduces this capacity to 2170 1/sec.

There is no history of flooding problems in this area with properties connected to this sewerage system. It is understood that during times of heavy rain the flow in the 1200 mm diameter sewer increases such that the sewage level in the pipe rises to between half and nearly full. Flow recorders have been installed for some six months and have confirmed that a 1 in 5 year storm event would generate the flow to about 2000 l/sec.

Effect of the Terminal at Cherition.

The exisiting sewers connecting to the 1200 mm diameter sewer in Shaftesbury Avenue are too small to accept the flow from the terminal development.

Provided the point of connection from the development is direct to the 1200 mm diameter sewer in Shaftesbury Avenue the maximum foul sewage flow of 166 l/sec from the terminal will not cause any adverse effects on the sewerage system.

Surface water runoff from the development is to be discharged to lagoons connected to the Seabrook Stream. The rate of discharge to the stream must be controlled to ensure that runoff is no greater than from the undeveloped site in order that problems downstream are not created.

Sewage Disposal

Present Situation

The existing 915 mm diameter (36") short sea outfall at Copt Point receives the foul sewage from the town of Folkestone for disposal to sea. Hydraulically there are no known problems with the outfall. Several storm water outfalls exist.

The length of the exisiting outfall is only 550 m and is far too short to allow satisfactory marine treatment to take place. This results in beaches in the area not meeting the EEC Directive of Bathing Water Quality.

Note : -

The beaches in this area are not designated bathing beaches but it is SWA policy to improve sub-standard outfalls in its area to meet the EEC Directive by the construction of properly designed long sea outfalls or inland treatment works.

Future Situation

A new long sea outfall will be designed to take existing and future foul sewage from Folkestone estimated to be 640 l/sec (which is approximately 3 DWF and excludes this flow from the terminal.

This outfall will be some 2 km in length and 915 mm diameter (36").

Storage for storm water would be provided by storm tanks and or enlarged sewers to act as storm holding tanks. Storm water would be screened before discharge in accordance with the recommendations of the Technical Committee on Storm Overflows and Disposal of Storm Sewage.

This sewage disposal scheme is estimated to cost nearly £8M, and work should start in 1990 with completion in 1993.

Effect of the Terminal at Cheriton

The discharge from the East Cliff sewer near Copt Point would be some 10,000 l/sec during a severe storm with the flow from the terminal of only 166 l/sec being insignificant.

During dry weather the flow from the terminal would increase the peak flow through the long sea outfall by approximately 25% and the pumps would cater for this to ensure satisfactory marine treatment is provided.

18 September 1986 LSD/3227/JWWC/AW



Shepway District Council Civic Centre, Castle Hill Avenue, Folkestone, Kent, CT20 2QY Telephone: (General Enquiries) 01303 850388 Fax: 01303 258854 DX 4912 Folkestone

SHEPWAY DISTRICT COUNCIL

Your Ref:

Our Ref: ljb266h/Mr Russell

Ext. No. 482

Tel. Direct Dial:

Date: 1 July 1997

Dear Resident

FLOODING

Properties in your neighbourhood have recently been threatened with repeat flooding. Whilst floodwater only entered relatively few homes and businesses, the concern expressed by many residents is entirely understandable.

The Council has always adopted a policy of providing help in emergencies and has often gone beyond its legal responsibilities with assistance and alleviation measures where these can be afforded. However, there is a worrying trend that the Council's efforts are being undermined by certain types of public reaction to Council officers who are, in fact, those actually on the scene trying to assist.

The District Council is seen responding to such incidents and many residents believe the flooding results from some neglect of the Council. It is important to note that the responsibility and, more importantly, the resources for drainage resides with:-

- Southern Water Services for foul drainage and surface water drainage
- Kent County Council for highway drainage
- Individual owners of property adjoining water courses
- Environment Agency for flood warning

Recent past activity by the District Council in clearing and repairing watercourses has been carried out at the Council's discretion, and this has helped prevent more serious incidents developing.

As there appears to be misinformation and confusion among residents concerning both the responsibilities and a perceived lack of response by the Council during the recent incidents, it is proposed to arrange meetings with the affected residents to:

- (i) examine the reasons for the flooding;
- (ii) clarify the responsibilities of the various agencies involved;

cont...../





- (iii) explain what the Council has done, is doing and what may be done in the future to alleviate flooding;
- (iv) discuss how individuals and the community can help.

I enclose a general advisory leaflet on this subject which you may find of interest.

To enable meetings with residents to be as valuable as possible, the Council is willing to hold a number of separate meetings to focus on matters of local concern to your neighbourhood. Meetings covering the following areas are initially proposed:

- Folkestone Harbour area
- Sandgate
- Russell Road/Bonser Road area
- Pavilion Road/Black Bull Road/Bradstone Avenue and adjoining areas
- Moat Farm Road
- Fairway Avenue

It is envisaged the meetings will be held in the evening and, depending on the numbers wishing to attend, in a venue as local as possible to your area.

If you would like to attend one of these meetings, please indicate by completing the attached reply slip and return it in the pre-paid envelope by Monday 14 July.

Yours sincerely

I Russell

Director of Environmental Services

SHEPWAY DISTRICT COUNCIL

Flooding Update

December 1997

Inside

Risk of flooding confirmed

Can the flooding be stopped?

Where will the money come from?

What have the Council decided to do?

What engineering works are involved?

Road gullies - Cleaning frequencies increased

Flood Warden

Southern Water Services Proposals

Risk of flooding confirmed

The detailed feasibility study commissioned by Shepway District Council from Bullen Consultants confirmed that there is a risk of flooding from all of the streams in Folkestone and the Hythe, namely, Enbrook, Seabrook, Mill Leese and Brockhill streams. The risk of flooding is due to poor structural condition of some culverts and limited capacity. The report concluded that some flooding would occur when storms exceed a 1 in 5 year return period on most of the streams whilst the risk of flooding is as low as 1 in 2 years in some places.

Can the flooding be stopped?

There are engineering works that can be carried out that would reduce this risk of flooding to an acceptable level. For dense urban areas this is normally accepted as 1 in 100 years. The cost of these works on all five streams would total to £3.1 million. However, to achieve a 1 in 100-year level of flood protection works would be required to Southern Water Services sewers as well as to the streams. Southern Water Services are presently undertaking works to improve the sewerage system Folkestone and are considering additional works to



improve the level of flood protection in flooding blackspot areas.

Where will the money come from?

If the Council is to carry out flood alleviation works it will need to borrow the money and get permission from Central Government. The Government department, which administers land drainage, is The Ministry of Agriculture, Fisheries and Food. Grant is available to the Council to help finance land drainage works which is presently 25% of the total cost. Even after receiving the grant from the government it would still cost the Council £200,000 every year for the next 40 years to pay for the £3.1 million works.

Unfortunately, there is another complication. The Ministry of Agriculture, Fisheries and Food may only permit the Council to carry out the most cost-effective schemes. This will result in a lower standard of service on both

the Brockhill and Seabrook streams. The total cost of the lower standard works would be £1.75 million. These works would cost the Council £100,000 every year for the next 40 years.

Any works that are required to Southern Water Services sewers would be paid for by Southern Water Services. Please see their section for further details on what action they are taking.

What have the Council decided to do?

Following the receipt of the detailed feasibility study the Council members decided to work towards solving the flooding problems.

They are progressing the detailed design work on a 'fast track' basis, which means that the design work will be completed by May 1998.

Thev have submitted an application to MAFF for approval to go ahead with land drainage works and to ask for grant aid. If the Council were able to get a speedy positive from decision central government it may be possible to start work on site as early as next summer. However, experience has shown that it often takes longer than this to progress grant aided schemes. Additionally there may be problems with land acquisition for the works in some areas.

Finally, the Council members were adamant that a consistent standard of 1 in 100 years should be adopted for all of the watercourses and the design work is proceeding on this basis. However, it is not known yet whether MAFF will approve this approach, or whether the Council will be able to afford the £3.1 million scheme.

What Engineering Works are involved?

Pent Stream

The preferred option for the Pent would Stream involve constructing overflows from the Pent A, B and C streams in Morehall recreation ground to connect into the 30 metre deep shaft that forms part of the Channel Tunnel Terminal surface water relief sewer. This would result in storm flows being discharged directly to sea by this sewer providing flood relief downstream on the Pent. This option requires consent from Southern Water Services and for them to grant this it has to be proved that there is currently spare capacity in this sewer. The only other works required are likely to be some improvements to the Pent D in the Pavilion Road area.

Enbrook Stream

The proposal for improving the Enbrook Stream comprises increasing the size of the existing outfall to the sea which outfalls near Martello Terrace and

providing a new outfall structure on the beach.

Seabrook Stream

The options for improving the capacity of the Seabrook Stream involve constructing larger culverts beneath Craythorne Close, Horn Street and Seabrook Court consequently allowing storm water to more quickly drain to the Royal Military Canal.

Mill Leese Stream

The proposal for the Mill Leese Stream is based on retaining storm flows in a reservoir. The best site for this reservoir has been identified as in a valley upstream of a disused railway embankment in Saltwood. It may be necessary to carry our minor improvements to the watercourses downstream.

Brockhill Stream

The works required to achieve a 1 in 100-year level of protection on the Brockhill Stream would comprise localised improvements and a new flood relief culvert in the London Road area. In addition a storm water storage reservoir would be required and a suitable site may be downstream of Brockhill Park.

Road Gullies – Cleaning Frequencies Increase

Residents have shared the District Council's view that, in areas prone to flooding, the cleansing of highway gullies only once per year was inadequate.

The Kent County Council (highway authority) has agreed to pay for an improved service. The gullies in your area will now be cleansed routinely four times per year.

Flood Warden



You will probably have seen in the local papers that the Council's new Flood Warden service is up and running. Mr Ron Deacy has taken up his duties and is engaged full time in the flood prone areas of



Folkestone, Sandgate and Hythe to help reduce the affects of any repeat flooding.

His duties include:

Clearing grilles on land drainage structures

I'm here to help you with all your flooding problems. Please give me a call.

- Patrolling roads to identify blocked or obstructed gullies
- Patrolling watercourses to ensure responsible behaviour by owners

Ron is available to help you.

Please contact him on telephone number 0468 272276 to report any concerns which may aggravate potential flooding problems. He can help in picking up any dumped rubbish, advising on sandbag delivery and use etc.

The District Council is financing this Flood Warden service pending the proposed construction of permanent flood relief works. Both the KCC and Department of Transport have agreed to provide a financial contribution to the Council's costs.

Sandbags are still available for collection free of charge from

our Ross depot. Please phone first to check availability on 01303 226161.

Useful Contacts

- Fire Brigade Tel. 01303 252680
- Flood Warden
 Tel. 0468 272276
- Kent County Council (Highways)

For the A259 (Blackbull Rd & Pavilion Rd etc.) Tel. 01634 232029

Other Roads Tel. 01303 850388

- Police Tel. 01303 850055
- Shepway District Council Tel. 01303 850388
- Southern Water Services Tel. 0345 200700



Southern Water has developed £3.6 million fast track programme of sewerage improvements in Folkestone to alleviate the risk of flooding in the town. The improvement scheme is divided into several parts - all to be implemented by the year 2000. The first phase of these improvements will be carried out in Sandgate, and is due to commence early in 1998, followed by the improvements in Marine Parade commencing during the summer of 1998.

Sandgate

In the past there have been a series of flooding incidents in the Sandgate area of Folkestone – both to private properties and the highway. Southern Water plans to alleviate these problems by overhauling the town's ageing drainage network.

The existing sewerage system in Folkestone is mainly combined, collecting rainwater as well as wastewater. Because this system was built when surface and wastewater volumes were much lower than today, the existing public sewerage system does not have enough capacity to deal with today's peak storm flows – occasionally causing flooding.

The scheme will involve enlarging the diameter of the existing sewers to increase the capacity, constructing a new storm tank, refurbishment of the Sandgate pumping station, and building an emergency storm outfall – in agreement with the Environment Agency.

Marine Parade

Marine Parade and the harbour area are situated in the lowest part of Folkestone. At the moment, the combined sewerage system has insufficient capacity and can become tide locked at high tide. This can result in regular flooding to the highway and many properties during storm conditions, particularly at high tide.

The problem of the system tide locking will be alleviated by Southern Water when its new pumping station at The Stade, Folkestone is constructed – due for completion by the end of 1999.

The improvements to sewerage system in the Marine Parade area include on-line replacement of existing sewers at a larger diameter to increase the capacity. A section of the sewer network will be separated from the surface water drainage system by the construction of a new surface water sewer. Finally, a new 1.2m diameter by-pass sewer will be tunnelled under the cliff behind Folkestone harbour to replace the existing sewers within the harbour area.

Benefits

As well as alleviating flooding in the town, the Dover Folkestone Wastewater Treatment Scheme will also bring other benefits including helping towards cleaner beaches and bathing water, better water recycled to the marine environment and reducing the and frequency of volume stormwater overflows.

Traffic

Unfortunately, this work will almost entirely be within the public highway, but Southern Water will draw up a comprehensive traffic management plan in consultation with Shepway District



Council to ensure inconvenience to local residents is kept to the minimum.

Southern Water will keep customers informed as work begins and progresses. If you have any questions about the sewerage improvements in Folkestone or the Dover & Folkestone Wastewater Treatment Scheme, please call our Customer Call Centre 0345 200700.

Warden is keeping flood water at bay

SHEPWAY'S new flood warden is paying dividends at Sandgate - and that's official!

The praise comes from The Sandgate Society which is never slow in coming forward to comment about matters of local concern.

Reg Turnill, chairman, revealed members will be writing to the council's Chief Executive, Ron Thompson, to congratulate the local authority for enlisting the services of Ron Deacey, this autumn.

"The roads here have been flooded for many years, but this winter they have remained clear despite the weeks of heavy rain." said Mr Turnill.

"This seems to indicate that flooding in the past is entirely due to Kent County Council not keeping the drains clear and I would think that people who have suffered flood damage in the past could justifiably sue KCC for negligence."

Report

However Jenny Webb, a spokesman for the county council, rejected his claim and says a forthcoming district council report into the area's flood levels will force both it and Southern Water to carry out urgently needed works next year.

She said: "Whilst we believe the flood warden is invaluable and helps with the gullies we don't believe the gullies are the main cause of the problem."

Shepway council spokesman, Ray Lewis confirmed: "The introduction of a flood warden has helped to alleviate much of the problems we have had in the past.

If an incident requires immediate attention Mr Deacey will try and tackle it and has the capability of removing blockages from drains. Where more work is needed he will contact our contract services department at the Shorncliffe depot."

According to his official job description the flood warden is responsible for patrolling, monitoring and undertaking cleansing duties within flood prone areas.

Shepway council works in partnership with KCC to provide an efficient and effective highways service

Anyone wanting to report a problem should ring Shepway on 01303 850388 and they will put them through to the appropriate officer.



Your Ref:

Our Ref: Direct Dial: 852364

SM11/JSB

258854

Fax: E-Mail:

construction.services@shepwaydc.gov.uk

23rd March 2000

To the Residents of Hythe, Seabrook and Sandgate.

Dear Resident

HYTHE BEACH MANAGEMENT

The last six months has seen considerable activity along our coastline. The area has witnessed the largest beach recycling operation to take place since the completion of the Hythe Coast Protection Scheme, together with the largest storm events experienced in recent years.

On the 24th October and between the 24th to 29th December 1999 the South East coast faced a succession of high tides and winds gusting up to sixty miles per hour. During the October storm the defences at Sandgate and Hythe were overtopped leading to some flooding of the coastal highways. Prior to the completion of the Hythe Coast Protection Scheme a storm of this magnitude would have led to failure of the defences along our coastline, leading to severe flooding. It is for this reason why the Council continues to monitor the beach levels and carries out essential maintenance works restoring the beach shape back to its original design standard.

Prior to the October storm the Council recycled 62,000m³ of beach material. The beach material was taken from the rock collector groynes at Battery Point, Seabrook and Twiss Road, Hythe and used to replenish the low areas along Sandgate Esplanade and West Parade, Hythe. The works were successfully completed within three weeks. Once again the importance of regular beach maintenance works was self-evident only a few weeks later when the storm struck our coastline.

Although emergency regrading of the beach in critical locations was carried out following both the October and December storms it is now necessary to carry out the annual regrading works from Sandgate Memorial to St Leonards Road, Hythe. The works are to commence on Monday 27th March 2000 and are planned to take two weeks to complete. Working hours will be restricted to weekdays from 07.30 to 17.00hrs. Inevitably, there will be some noise and disruption although this will be kept to a minimum.



In the interest of safety please keep clear of the work areas. Parent and Guardians of children should take particular care to warn them about the works.

As mentioned in my letter of September 1999 the Shepway coastline is being reviewed by independent consultants as part of the Folkestone to Rye Coastal Strategy Study. The study looks at the standard of protection provided by the defences along each discrete length of coastline and sets out a framework of shoreline management for the next fifty years. The Strategy Study is nearing completion and it is intended that the recommendations will be presented to the public by several roadshows this summer. The venues and timing of the roadshows will be advertised nearer the time.

The Council are continually reviewing the Coast Protection service that we provide and feel that an important part of this process is to gather your views on how we have performed in the past as well as any thoughts you may have on improving the service in the future. It would be appreciated if you could spare a few minutes to complete the attached questionnaire and return it to me in the enclosed prepaid envelope.

Your continued co-operation in the future management of our coastline is greatly appreciated. If you have any questions regarding the beach maintenance works please contact Joe Brooks on 01303 852364.

Yours sincerely

Ralph Young

Assistant Director

Construction and Health Services

RESIDENTS face a bitter battle if they are to get their way in solving the notorious sewage problems at Sandgate and Hythe.

The Southern Water Authority says it has scientific evidence to prove its plan for pumping raw sewage through a long sea pipe is adequate and cheaper than the alternative.

- By -Robert Schopen

"I can see no argument that can be advanced against it, except on emotional grounds," said the divi-sional manager of the East Kent SWA, Mr Michael Knill.

"Some people have the idea that putting sewage into the sea is a nasty thing to do. I hope they come forward with something more than that," he said.

The public will have its chance to study the SWA's argument at a meeting in several weeks' time.

If householders are to sway the au-

thority from its confident position they will have to produce hard facts.

But, said Mr Knill: "We have done

But, said Mr Knill: "We have done the necessary investigations and analysis of the alternatives. It is unlikely that anyone will come up with anything new."

Plans for an outfall running 2.4 kilometres out to sea will cure the problem of lumps of excrement pouring onto the beach at Sandgate, he claimed. Float, dye and bacteria tests show

that wind will not blow the sewage back onto the beaches.

Because it goes into deeper water, the 1½ million gallons of sewage which will pour out daily, 99 per cent of it water, will be more quickly diluted by the sea. conform The system will conf highest EEC standards. with the

Mr Knill said it would be impossible to expand the existing inland treatment plant at West Hythe because the pipeline runs through the rifle ranges and the Army is not prepared to close them down while the work is done.

When Shepway District Council considers the application for the outfall after the public consultation it can only object to the scheme on planning grounds, not because it would prefer a better scheme, he said.

But if the council does turn it down

then the matter would have to go to a

public inquiry.
This is what many objectors to the SWA plan want. Folkestone resident Mr David Bowker should be giving a lead to protesters

He says it is monstrous that indi-

viduals should be forced to hire solici-tors to fight the "all powerful" SWA. He has sent a 31-point objection to

the council.

It is a public scandal that an archaic and unhygienic system should be built and unhygienic system should be built which would be a massive health risk to bathers and could lead to them catching polio, typhoid or even killing them, claims Mr Bowker.

He is concerned that the pipe will be broken by the sea or anchors and make the problem worse than it is now. He and his children, from Cliff Road, have often found themselves swimning

have often found themselves swimming in a soup of sewage and toilet paper off Sandgate.

Sandgate.

Cost should not be a factor when human and animal life is endangered, said Mr Bowker.

Broadcaster Mr Reginald Turnill, from Hillside, Sandgate, suggests some local residents would gladly help with the work themselves just to get a treatment sleat. ment plant

This could be the last chance century for the area to get "civi sewage treatment," he says. civilised

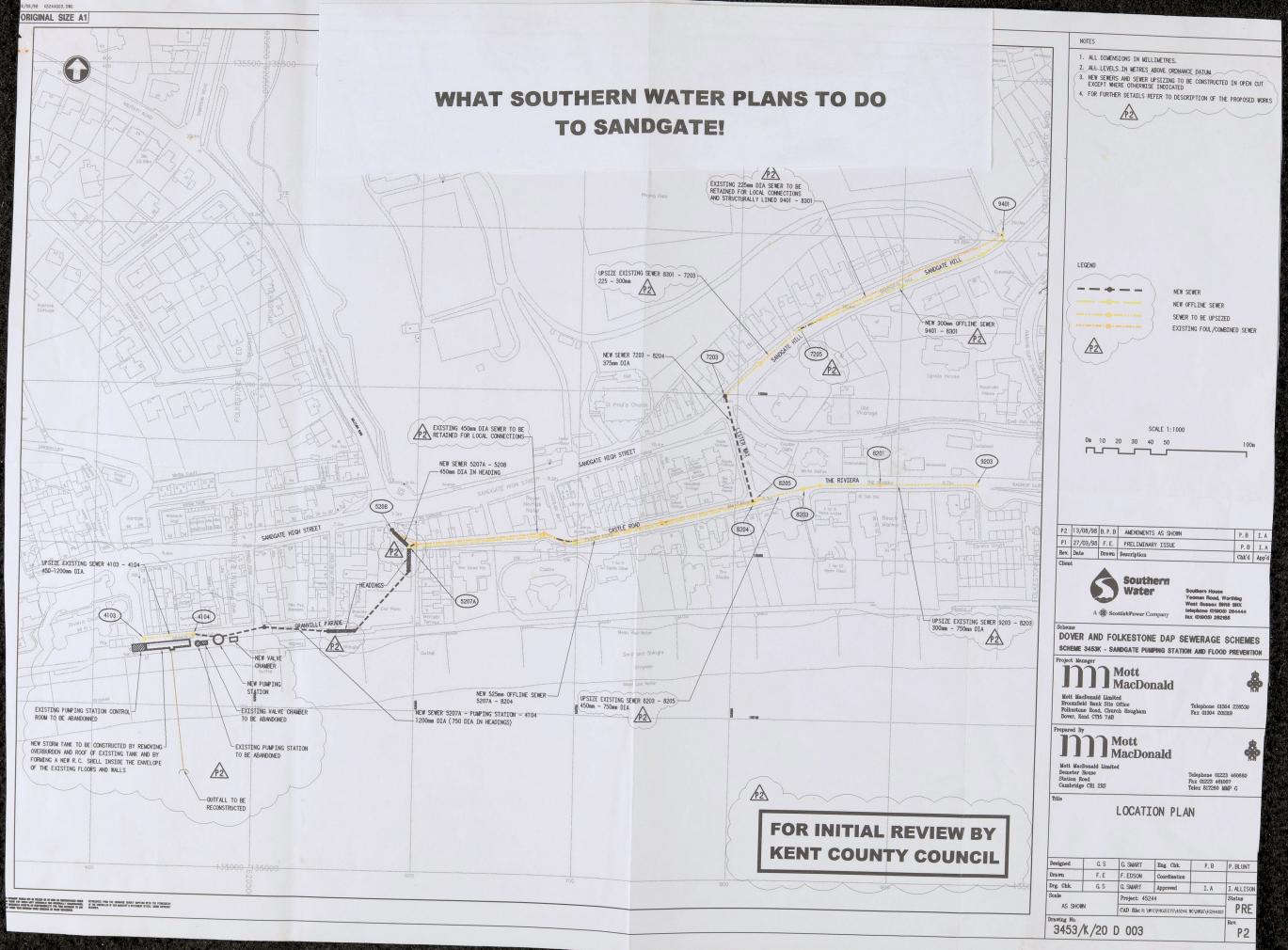
There is a lot of opposition among local people to a sea outfall, which will ruin fishing grounds and drive away tourists, and local councillors should take this into account when they vote on the appli-

cation, he said. Shepway's cation, he said.

Shepway's Controller of Technical and Planning Services, Mr Trevor Greening, said its planning power only covers the area from the pumping station to the low water mark on the beach.

It cannot dictate to the Southern Water Authority, for disposing of sawage how.

Southern Water Authority, for disposing of sewage, how long the outfall should be, he





A ScottishPower Company

Customer Services

The Occupier
The Sandgate Society
51 Sandgate High Street
Sandgate
Folkestone
Kent

Your ref

Our ref

27 August 1998

Contact

Date

Dear Customer

Dover and Folkestone Waste Water Treatment Scheme Sewerage Improvements, Sandgate

Southern Water is planning to commence work on major improvements to the sewerage system in Sandgate. At present the system does not have enough capacity to deal with peak storm flows and in the past there have been a series of flooding incidents, both to private properties and the highway. The scheme will provide additional capacity within the system to reduce this risk of flooding.

This construction programme is due to start early in 1999 and will continue until late Autumn 1999. As part of Southern Water's commitment to work closely with the local community, we plan to bring an exhibition to Sandgate in Autumn 1998, to give you the opportunity to view the proposed work in full and discuss its implications with the project team. We will contact you again once a date and venue for the exhibition have been agreed.

I hope you will take the opportunity to attend this exhibition. If you anticipate any difficulties or have any special needs arising from this work, please call our main site office on 01304 226539 where our team will do all it can to help.

Yours sincerely

David Lewis

Customer Services Manager





The Occupier
The Sandgate Society
51 Sandgate High Street
Sandgate
Folkestone
Kent CT20 3AH

17 November 1998

Dear Customer

Dover and Folkestone Wastewater Treatment Scheme Sewerage Improvements, Sandgate

You will be aware that Southern Water is due to start work on the above improvement scheme early in 1999, as advised in our letter of 28 August.

As part of Southern Water's commitment to work closely with the local community, we would like to invite you to attend a public exhibition. This will give you the opportunity to view the proposed work in full and discuss its implications with the project team.

The exhibition will take place on Friday 4 and Saturday 5 December. Held in the Royal Norfolk Hotel, Sandgate High Street, the exhibition will be open from 12 noon - 7pm on the Friday and from 10.00am - 4.00pm on the Saturday.

I hope you will take the opportunity to attend this exhibition. If you anticipate any difficulties or have any special needs arising from this work, please call our main site office on 01304 226539 where our team will do all it can to help.

Yours sincerely

David Lewis

Customer Services Manager



bather /

My next petition concerns also concerns the matter of sewage, and sullage, spoil and land-drainage disposal which could affect my personal amenity, For the sake of time I will concentrate on sewage, and will be referring to Channel Tunnel Project, Environmental Effects inthe UK published 1985, with particular reference to Reports 17.

In Report 17, it is proposed that the foul sewage (prior to Tunnel entry) be incorporated into the Folkestone combined sewerage system which presently outfalls, untreated at Copt Point. This lies not far from Folkestone Sands to the east of the harbour. This is a short outfall which you are welcome to view when sewage is released at low water.

The present, predominantly elderly population of Folkestone (incl. Sandgate) is between 43 and 45,000 and could be in the region of 50,000 by the year 2000.

Consultants to Eurotunnel estimate that by year 2003, there will be 29 million car, coach and foot passengers a year, excluding high speed train passengers.

At present there is no estimate for the increase in human waste alone. It could be in the region of 40%. What is obvious, however, is that Eurotunnel operations will significantly add to the present inadequate system of local sewage disposal. It will certainly increase the bacteria count in this resort and fisheries area, where I regularly bathe.

A long sea outfall is presently under construction at Hythe, despite widescale demands for an inland sewage treatment.

Sandgate lies in the bay between Folkestone and Hythe and is affected by both the westerly flow from Hythe and the easterly flow from Folkestone. Wind-surfers and boatsmen have reported conditions, on occasion, as disgusting. The acceptable EEC beach count is 2000 E.Coli per millilitre. The E.Coli count at Sandgate Esplanade, 21 August last, was \$6,000 per 100 m.l.

In view of the Eurotunnel pressures, the present Folkestone system will inevitably have to be upgraded (SWA have approved the Council's submission for a 5-year capital programme but the Water Authority is unable to give any definite date or commitment).

As a petitioner pointed out yesterday, too many invisible charges are falling upon the taxpayer. Ideally, there should be provision for an inland sewage farm, the cost to be shared by Eurotunnel in conjunction with Shepway District Council and Southern Water Authority.

Conversation, Mr Wells, Shepway 16.9.86
Southern Water Authority Routine Bathing Beach Survey 27.8.86
EEC limit, 10,000 coliformes per 100 millilitres.
2,000 E.Coli per " " "

SWA checkpoints: Folkestone Sands, Sandgate Esplanade, Hythe Fishing Beach Sandgate: 7.8.86.
Coliforme 38,600 E.Coli 18,000 36,000

* exacta

Shame of a tide of filth

THE beaches in Shepway are in a disgusting state and many people have avoided going in the water for some time now.

The report by the Marine Conservation Society has just confirmed their health fears

rather than telling them anything new.

Copt Point, on Folkestone's Warren, is probably one of the most disgusting places along Shepway's coastline. People who walk along there have to dodge lavatory paper, condoms and other objects from lavatories which have been washed up whole on the rocks.

The conservation society identified Sandgate beach as being the worst. Anyone who walks along the promenade or who drives past on a regular basis will know the water always looks a disgusting brown colour rather than an appeal-

ing blue.

An it's not only the sewage that people have to dodge at Sandgate. Last year the *Folkestone Extra* reported a story about a woman who went to sunbathe on the beach and sat on a syringe, which was probably used by a drug addict.

Southern Water's Operation Seaclean starts in Shepway in the autumn but in the meantime we have to put up with this appalling situation.

This is both a shame for residents and a pity for the district's tourist industry which is undoubtedly being affected.

THE death of Hythe journalist and sports coach

Cliff Temple is very sad.

Mr Temple was a well-respected man in the world of athletics and in his home town. This respect is reflected locally by the fact that the Hythe Rotary Club has this year decided to dedicate its annual charity Round the Houses Run in memory of him.

The impression most people had of him was that he was a talented, committed and enthu-

siastic coach.

This is not only a sad loss for his family but for hundreds of athletes too.

The best free newspaper in Kent

FAMILIES WARNED TO STAY OUT OF THE SEA

FAMILIES are being warned to stay away from Shepway's beaches this summer as they are contaminated with sewage.

The warning comes from the Marine Conservation Society which has criticised the state of beaches from New Romney to Folkestone in the 1994 Reader's Digest Good Beach Guide.

The society claims people risk picking up ear, nose, throat and gastric infections if they go in the sea — and that swimmers at Sandgate beach could even pick up hepatitis.

Greatstone Beach, Littlestone-on-Sea, St Mary's Bay, Dymchurch Hythe Road, Dymchurch Beach, Dymchurch Redoubt, Hythe, Sandgate Beach, Sandgate Town Centre, Folkestone, and The Warren, are all listed in the guide. The water testing was carried out by the National Rivers Authority.

Sandgate beach was found to be the worst and was failed by the society. It was found to be heavily contaminated by sewage.

Folkestone beach was given a one dolphin symbol which means it does meet minimum legal requirements in the UK but is still by JANE BARLOW .

contaminated by sewage and still carries a "significant" health risk.

The others were given two dolphins, which means they are slightly better and pass current EC standards, which are soon to be upgraded. The society says the beaches are then likely to fail and still advises people to stay out of the water.

Steve Burton, who runs Activ, a shop for windsurfers in Sandgate Road, Folkestone, windsurfs at Hythe and St Mary's Bay. He said: "Local windsurfers are very concerned about the state of these beaches and are working with the national organisation Surfers Against Sewage in an effort to get them improved."

Peter Harnett, divisional scientist with Southern Water, said: "This is all a bit exaggerated. All these beaches meet required standards except Folkestone, which we are working on."

Shepway council spokesman David Woolf said the beaches were constantly monitored and all but Folkestone met requirements.



HOUSE OF COMMONS LONDON SWIA OAA

Mrs L Rene-Martin 149 Sandgate High Street near Folkestone Kent CT20 3BZ

4th November 1986

Our Ref: DOT/ctb

Dear Mrs Rene Martin

Thank you very much for your letter of 2nd November - which arrived most opportunely, since we will be deliberating upon, and voting on, our amendments to the Bill tomorrow!

The question of principle that we have to consider is whether or not Eurotunnel should be made liable for contributions to infragtructure projects which would normally be within the responsibility of another authority. I think that my colleagues will probably take the view, that, in general, they should not be liable, any more than any other business - no matter how large scale - would be when installing itself in a particular locality. After all, Eurotunnel will be a major source of rate revenue for the Kent County Council and the District Counils, for many years to come! That said, I doubt whether the Committee will go on to consider whether an exception from this general principle should be made for the sewage works to which you refer.

However, I must not anticipate...

Should the Committee decide not to amend the Bill in this sense, I am sure that you will be able to petition the House of Lords - although it will be up to the Lords Select Committee to formulate its own rules of procedure, which may be somewhat restrictive, after the very full consideration that has been given by the House of Commons Select Committee.

On balance, I feel sure that the best way for you to pursue this important matter - as you know, I think you have a strong case - will be by continuing to work on the local authorities to improve quality standards for sewage treatment, backing this up by supporting progress towards improvements through the EEC. I wonder whether this would not be a suitable subject to take up with your Euro MP?

c.c. Michael Howard Esq MP

MRS L RENÉ-MARTIN COAST COTTAGE 149 SANDGATE HIGH STREET NEAR FOLKESTONE KENT CT20 3DA

Submitted to DoE Enquiry SE/5281/219/3

Subject. Marine and Residential Development, Princes Parade, Hythe Prepared by Mrs. L. Rene-Martin on behalf of Sandgate Society

Date November 1987.

PREAMBLE

followed by

STORM, FLOOD, TIDAL WAVE

REPORTS

Folkestone, Sandgate and Hythe Coastline
1808 to Present

with illustrations and newspaper cuttings

The Sandgate Society is affiliated to: Kent Federation of Amenity Societies, Committee for the Preservation of Rural Kent and the Civic Trust, and has over 400 members. Mrs. René-Martin will say: I am a founder member of the Society (1962). During my working life I was with UNICEF in Paris; later I was Production Manager, Shell Aviation News and then for Scientific Publications at the Zoological Society of London. Since retirement my interests are directed to conservation matters and local history. Articles in'Country Life' and 'Kent Life', and first Chairman, Sandgate Heritage Trust. In World War II, I was a Plotter, WRNS.

PREAMBLE

- 1.0 Storm, flood and shipwreck are not uncommon to this area known as Romney or Dungeness Bay. (See illustrations). The recent storm, 16 October 1987, of exceptional ferocity Force 11, is only one of many incidents summarized here, which have damaged the coastline and endangered life and habitation. These random examples are intended to show the frequency and intensity of storm conditions which make this particular area wholly inappropriate for a small harbour/marina complex.
- 1.1 The North Sea surge forcing its way through the narrow Dover Straits is also a very real hazard.
- 1.2 Indeed, this stretch of coastline which includes Seabrook and Sandgate, forms the most recessed part of the bay. It opens wide upon the English Channel and is exposed both to the prevailing s.w.winds and to southeasterly and southerly gales. Disastrous floods in 1876/77 inundated the whole area south of the Seabrook Road (Part B Illus.B)
- 1.3 The raised roadway and seawall from the Imperial Hotel to Seabrook Police Station was built in 1881 by the Seabrook Estate Company, a subsidiary of the South Eastern Railway Company. Three quarters of a million cubic yards of shingle were lifted from the foreshore to create this embankment. Known as Prince's Parade, it was seriously breached in several places in the early part of this century, and the road and tramway fell into disuse. Finally, it was given over to Hythe Town Council who rebuilt and re-opened it in 1938, with the aid of substantial government grants and loans (subject of a separate historical submission).
- 1.4 Under normal conditions, the mean tides come up to the seawall. In view of this vulnerable location the risks involved in deliberately breaching the seawall to create a lock-gate would seem considerable. In addition, the proposal to enlarge the present canal both in depth (an added lott we understand) and extent to form an inland lagoon in close proximity to the sea, would certainly exert extra pressures on the sea defences.
- 1.5 The construction of the harbour arms will further affect littoral drift and distort currents, especially under storm conditions. At Sandgate particularly, it will cause further coast erosion which is already critical on this part of the coast (See separate submission on Coast Exosion and illustrations).
- 1.6 The 'inhospitable nature' of this coastline where storms can blow up very suddenly, will require increased surveillance by coastguard and air-sea rescue services; it will put additional strain on hospital and emergency services.
- 1.7 At present, Shepway District Council is both the Coast Protection Authority and the Land Drainage authority. It is important that no extra costs fall on the ratepayers or on the national budget.
- In conclusion, the whole siting of this proposed harbour/marina/housing complex is totally inappropriate. By contrast, Folkestone Harbour and freight area with its direct rail-link to London is the ideal location for a sizable marina and residential complex, especially in view of its proximity to town and shops. Plans by Brent Walker and Peter de Savary are already afoot to acquire and convert it to such use once the Chunnel reduces its commercial use or renders it redundant.

1692 REPORTS OF AN EARTHQUAKE, Aso 1938, 1970 (Earth Tremors)
See 55/5

STORMS

1808 New Annual Register. 19th November 1808

At the change of the moon, and during an invisible eclipse of the sun, this night an extraordinary high tide accompanied by a strong south-west wind inundated the whole of the Southern Coast from Folkestone to the Isle of Wight. At the former place the swelling of the sea carried off a prodigious quantity of the beach and sand, so as to leave the foundation of several homes quite naked. Fears were at one time entertained that the weight of the sea would break the banks of the Royal Military Canal at Hythe though situated a quarter of a mile from the shore; but fortunately after destroying several storehouses, haystacks etc., the sea obtained a vent to the canal, and was thus prevented doing further damage. (See also Vine p.90). The south bank of the canal was destroyed - in some places by as much as 4 ft - for nearly 2 miles, as a wave of water 5 ft. high entered the canal and rushed westwards.

Letter from the Surveyor of Highways, Cheriton, to the Inspector General of Fortifications (PRO W044/124) 9th April 1844

'I have the honour to report that the sea has been gradually encroaching for many years on this part of the coast and that the late gales in conjunction with very high spring tides caused several breaches in it, carrying away portions of the footpaths ... and rendering dangerous to the public'

1873 Kentish Express 1873

High tide and gale carried away many yards of road at Battery Point.

1875 Kentish Express Report of Storms. 14th November 1875 Also 6th January 1877

1876/77 New Year's Day

The Gale on New Year's Day: Large quantity of stone work at Sandgate Castle washed away. See Appendix: Engraving showing Seabrook area flooded.

Newspaper Cutting (Fynmore Scrapbooks). 12th October 1889

The gales have played sad havoc with the seawall at the west end of Sandgate Esplanade, the part in front of the Battery Point being almost destroyed. Several large holes of from twenty to fifty yyards in length, and twenty or thirty in depth, have been made in the wall; the pavement has in places been washed away, the tramway undermined, gas pipes laid bare, and the road communication to Seabrook and Hythe threatened. More than half of the green plot, which at one time was intended for lawn tennis courts, has been washed away. Lifeboat house .. has also suffered severely, the sea having quite undermined the building end of the Seabrook wall also much damaged, stone steps undermined ... Hythe wall has also suffered severely.

Folkestone Herald, Leader 'The Terrible Storm'. 28th November 1893

Since November 11th 1891, there has not been so disastrous a gale as the north-easter which prevailed over this part of the country from Saturday night until Sunday evening... wind velocity of ninety miles an hour ... cross channel services suspended ... Institution lifeboats launched sixty times to the aid of vessels in distress.

1895 Daily News. 7th December 1895

Gale continued in the English Channel with increased violence .. very high flow of water ... huge waves breaking on the foreshore and racing over it on to the roadway. Whole promenade between Sandgate and Seabrook covered with shingle to a considerable depth ... tram service between Hythe and Sandgate had to be suspended.

1894 Newspaper Report 27 Jan. 1894

EFFECTS OF THE GALE: The Sea Wall at Sandgate, Battery Point.

During the southerly gale which raged at Sandgate last week, the new sea wall was seriously damaged. The sea at high tide was so rough as to break in tons over the esplanade into the road;

The Hythe and Sandgate Tramway Company have had to cease running their cars in consequence of the injuries to their lines.

Newspaper Cutting (Fynmore Scrapbooks p.95) 12th December 1896

Damage to the Sea Wall and Road at Seabrook: The gales of last week did serious damage to the roadway near the old Lifeboat House at Seabrook, and also to the sea wall about a quarter of a mile to the westward. The Sandgate sea wall remains intact, but between the point where it ends and that where the Seabrook Estate Company's wall commences, the sea has scooped out the metal and undermined the tramway for some distance ... the breach in the seawall is of large dimensions ... tramcars prevented from running.

1929 July 1929.

TIDAL WAVE 10-12 feet above ordinary sea level at the crown of the swell. Thought to be a recurrence of episode in 1812, some disturbance under the sea-bed.

Fishermen and others on Hythe beach described the conditions there, for a short time on Saturday evening, as being unparalled in their experience. A huge black cloud formed out at sea and approached the town with almost incredible rapidity. It was low tide at the time, but two successive waves about 10ft. and 4ft. in height brought the water to the high water mark within a space of 10 minutes ... Very luckily there were no boats in the bay, because no small craft would have survived ... 'With an ordinary tidal wave (said an onlooker) one has plenty of warning. This rose out only just behind the surf at a tremendous height and rushed up the beach, collapsed, and went back again to vanish just as quickly'.

1935 Folkestone Herald. September 1935. p.14

Gale and Storm Damage: Folkestone swept by worst gale for many years, Sandgate flooded ... Maid of Orleans unable to dock at Folkestone Harbour, harbour closed to traffic. Gale damage at Hythe, considerable amount of water lying between Cannongate and Seaview Buildings ... huge blocks of concrete removed at Prince's Parade. Sea came through almost where it willed.

1935 Hythe B.C. Minutes 912 Canal Outfall. 20th September 1935

The bank of the Canal near the outfall shewed signs of disturbance owing to the large quantity of water flung over in the recent storm. The Surveyor proposed to examine the Bank carefully when the water level was reduced and to carry out such repairs as were necessary. Approved.

1935 Folkestone Express. 28th September 1935

With regard to the seawall and promenade at the Seabrook end of the Borough, the Borough Surveyor said 150 tons of roadway had been carried away and 30ft. of promenade had collapsed ... Fifty per cent. of seawater came over canal bank and found its way into canal and damaged the banks.

1938 Folkestone Express. 22nd. January 1938

GALES ... cross channel steamer hits quay .. SS Biarritz badly delayed ... many ships sheltered in Dungeness Bay ... Dutch motor vessel shore at Littlestone.

1948 Folkestone Herald. 31st. January 1948

Huge Seas Batter Harbour Office: After a week of channel storms, the S.W.Gales in the early hours of yesterday morning caused damage at Folkestone Harbour and at Sandgate ... a very high tide with as much as 20 ft. of water at Folkestone Harbour, huge waves batter coastline, hundreds of tons of shingle thrown across main road.

1949 Folkestone Herald. 1st. January 1949

Huge waves break over seafront, gusts over 60 mph broke over promenade and seawalls, main road near SeaPoint Cafe flooded.

Folkestone Herald. 8th January 1949

Great Gale Leaves Trail of Destruction: After the week-end gale, the worst in living memory, comes the reckoning of widespread damage done at Folkestone & Hythe district. Hundreds of houses damaged and repair bills running into

many thousands of pounds. Side of SeaPoint Cafe (Sandgate) disappeared into deep cavity excavated by the sea, will be a write-off ... Extensive damage to outer apron of Sandgate Castle, cavity extending under the bastion discovered after gales had moderated. Gusts reached 90 mph.

1949 Folkestone Herald. 26th November 1949

Sandgate Suffers more Damage: Spray from waves hitting Esplanade thrown 60 feet into the air, tons of seawater and shingle fell on road ... road flooded to a depth of 2 feet .. Castle cracks widen.

Folkestone and Hythe Gazette December 1951 p.6. Pictures (January 2nd. 1952)

Houses undermined at Sandgate, seawall breached immany places including Coastguard Terrace.

1953 Folkestone and Hythe Gazette. 4th February 1953

High tides 6 feet above the normal level caused floods along a stretch of the Dymchurch Road from Palmarsh Avenue to Palm Beach Avenue, Hythe. Road closed from 11 a.m. Sunday to 10 a.m. Monday. Highest tides for 20 years. Floods in Thames Estuary.

Note. This was due to the North Sea Surge.

1967 Folkestone and Hythe Gazette. 8th November 1967

Flood Havoc closes roads, cuts power: Thousands of pounds worth of damage by flooding seawater between Folkestone and Dymchurch - floodwater four feet deep swept into Sandgate and Seabrook. It reached a depth of two feet in places at Hythe and Dymchurch on Saturday. About 500 homes in Hythe blacked out when sea flooded Seeboard's sub-station at Ormonde Court. Firemen worked non-stop for almost 12 hours pumping flood water from homes in West Parade and Ormonde Road. Floods swamped garage and police station at Seabrook. Sweet stall hurled into Prince's Parade by huge waves at Seabrook. Road ripped up by sea.

1967 Works Committee (Hythe Borough Council) 27th Nov. 1967. p.229 Prince's Parade, 398.

> Considered: Report of the Town Clerk that the recent storm had caused damage to the tarmacadam surface at the eastern end of Prince's Parade ... remedial works to be carried out.

- 1969 Folkestone Herald. 15th November 1969. Front Page Pictures Four-day Fight to Keep Sea out of Homes: High tides and gale force winds batter coastline, residents fight a 4-day battle to keep sea from their homes.
- 1974 Folkestone & Hythe Gazette. 13th February 1974. Front Page GALES BATTER COAST TOWNS: Some of the highest tides for 300 years whipped by hurricane-force winds pounded seafronts at Folkestone and Hythe over the weekend. Police closed Sandgate Esplanade and Princes, Marine and West Parades to traffic during high tides on Saturday, Sunday and Monday as huge waves swept across the road .. ferry services stopped at Folkestone ... Seawalls at both Sandgate and Hythe were damaged by the waves.
- 1979 Folkestone & Hythe Gazette. 13th January 1979. p.11 Pictures Sandgate took a battering on Wednesday as Force 10 to 11 gales coincided with a high tide at 8.30 a.m. Roads flooded.
- 1981 South Kent Gazette. 16th December 1981. p.3. Pictures BATTERED SHEPWAY. ... Coastguards said that the flooding had been caused by a combination of particularly high spring tides and very heavy south easterly winds which drove water down the Channel from the North Sea.
- Folkestone Herald. 4th February 1983 HAVOC AS STORMS BATTER COAST Floods, blocked roads, cancelled ferries ... that was Shepway this week as storm-lashed seas created havoc. One of the worst hit areas was Hythe, where garages at Ormonde Court were flooded to a depth of seven feet. Residents there also had to put down sandbags to keep the sea at bay.

1983



A ScottishPower Company

Customer Services

Mr R Turnill Somerville Lodge Hillside Sandgate Folkestone Kent CT20 3DB Your ref
Our ref

Date

1 April 1999

Contact

Dear Mr Turnill

Dover and Folkestone Wastewater Treatment Scheme Sandgate Flood Prevention and Bathing Water Improvements

We wrote to you on 26 February 1999 advising you that work on the above scheme was due to start in early March 1999.

Our Contractor, Nuttall Hynes, will shortly begin constructing a new sewer in Sandgate Hill. Initially the work will be concentrated in the area near the junction of Lister Way and will then progress eastwards to approximately half way up Sandgate Hill. This section of work is scheduled to begin on 12 April 1999 and is due for completion by the end of July 1999. However this is obviously dependent on the programme of the contractor and maybe subject to change.

We will also be carrying out renovation work to some of the existing sewers in Sandgate High Street. This work will take place in two sections. The first section is near to St Paul's Church and will begin at the end of April / early May. The second section of work is near to Chichester Hall and the Little Theatre and will begin at the end of June. In both instances the work is scheduled to last for two weeks.

To ensure that this work is carried out safely, traffic management measures drawn up with the agreement of the local highways authority will be implemented, including some temporary traffic lights. Parking will also be restricted in Sandgate Hill and also for a short period in Sandgate High Street. Access to properties will be maintained at all times. Our contractor will be required to work safely and carefully at all times, but we ask that you take extra care when in the vicinity of our works.

Whilst there will inevitably be some disruption during the work we hope you can also appreciate this important flood relief scheme will bring long term benefits to the whole area. The whole scheme is programmed to be completed by the end of 1999.

In the meantime if you have any queries or difficulties please do not hesitate to call the main site office on 01304 226539 where our team will do all it can to help.

Yours sincerely

Les Kelley Project Manager

AR S



The Occupier
The Sandgate Society
51 Sandgate High Street
Sandgate
Folkestone
Kent CT20 3AH

Your ref

Our ref

Contact

Date

23 September 1999

Dear Customer

Dover & Folkestone Wastewater Treatment Scheme Sandgate Flood Prevention and Bathing Water Improvements Scheme

Now that our work is well underway in Sandgate I would like to take this opportunity to update you on the progress of our works.

As you may be aware a new pumping station is being constructed in Granville Parade under part of the promenade and Granville Parade itself. This work is progressing well and the pumping station will be in operation shortly.

In the western end of Granville Parade work is to begin shortly on improving the poor structural condition of the existing storm tank. The roof of the tank will be removed and a new reinforced concrete shell will be built inside the existing structure. To enable these works to be carried out a tower crane, 13 metres high will need to be installed on the promenade adjacent to the public conveniences. This is due to be erected around the middle of October 1999 and is expected to be in use until the end of January 2000.

A temporary platform has been built to aid construction of the new, 600mm diameter stormwater outfall. This new outfall will replace the previous shorter outfall and will follow the same line as its predecessor. For safety reasons part of the beach has been closed off to members of the public. The beach will be opened and the temporary platform removed on completion of the works.

Improvements in Sandgate Hill to increase the size of a section of the existing sewer and install a length of new sewer are both now largely complete. The existing sewer in The Riviera, between Lister Way and Radnor Cliff is being reconstructed to provide greater capacity.

Work is progressing in Castle Road car park and construction of two tunnelled sewer connections at the entrance of the car park will begin shortly. After this is completed a new sewer will be constructed along the length of Castle Road. The existing sewer running under Castle Road will be relined and a section completely replaced after the new sewer has been constructed.

Wherever possible the positioning and construction methods of these sewerage system improvements have been designed to minimise disruption to the local area and adjacent properties.

The work is now well underway but has been subject to delay primarily due to the unforeseen ground obstructions. Therefore the overall scheme is currently expected to be completed by early February 2000 though this is dependent on no further difficulties being encountered. I therefore intend writing to you again in November updating you on the progress made.

We will continue to keep you informed as the work progresses and we thank you for your continued patience. In the meantime should you have any queries or difficulties, please do not hesitate to contact the main site office on 01304 226539 where our team will do all they can to help.

Yours sincerely

Les Kelley Project Manager

L. J. Kelley

Southern Water Site Office Broomfield Bank Folkestone Road Church Hougham Dover CT15 7AB





A ScottishPower Company

The Occupier
The Sandgate Society
51 Sandgate High Street
Sandgate
Folkestone
Kent CT20 3AH

Customer Services

Your ref

Our ref

Date

9 December 1999

Dear Customer

Contact

Dover & Folkestone Wastewater Treatment Scheme Sandgate Flood Prevention and Bathing Water Improvements Scheme

As mentioned in our letter of 23 September 1999, I would like to take this opportunity to update you on the progress of our works in Sandgate.

In Granville Parade the new pumping station is now operational. The roof of the existing storm tank has been removed and despite some difficulties encountered in the storm tank itself, our contractor is in the process of constructing the base and walls of the new tank. It is now anticipated that the works will be complete by the end of March / beginning of April 2000.

The seaward section of the outfall is complete and the temporary platform has been removed. We still have to lay the remainder of the pipe up the beach and so this section of the beach will remain closed for safety reasons.

The last manhole in The Riviera near the junctions of Radnor Cliff Crescent is currently being constructed and once this is finished the area will be fully reinstated and reopened to the public. Work will then begin in Lister Way where a new 375mm diameter sewer will be built. To enable this work to be carried out safely Lister Way will be closed to traffic, however a diversion route will be put in place. Work in Lister Way is scheduled to be finished by Christmas with the reinstatement work to the area taking place early in the new year.

The laying of the new 525mm diameter sewer in Castle Road West is progressing well. However, our contractor has encountered a few difficulties with the existing sewer that we are trying to overcome at present, which will cause some delay to this section of work. In order to ensure that the work in Castle Road is completed as soon as possible in the new year the contractor will have two gangs working in Castle Road simultaneously. Due to this increased activity additional traffic restrictions will be in place which will further restrict access to properties and affect off road parking.

Work on the manhole at the entrance to Castle Road car park is ongoing. Once this work has been completed, in approximately two weeks time, the west end of Castle Road will be reinstated and access to this part of the road will again be possible.

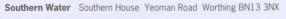
We will continue to keep you informed as the work progresses and we thank you for your continued patience. In the meantime should you have any queries or difficulties, please do not hesitate to contact the main site office on 01304 226539 where our team will do all they can to help.

Yours sincerely

Les Kelley Project Manager

L. J. Kelley







From: Lieutenant Commander R.F. Colvile, D.S.C., R.N. (Ret.), M.I.E.E., M.Inst.M.C.

FRENCHES, 2 THE ESPLANADE, SANDGATE, KENT.

Tel. Folkestone (0303) 38272

The Hon Secretary, The Sandgate Society, 26.6.80 The Old Fire Station, Sandgate.

Dear Mrs Lachlan,

The question of the pollution of the sae off Sandgate and Hythe was raised at a recent meeting of the Sandgatexx Ward Conservative Committee at which all three of Sandgate's councillors, together with Captain Lawrence, our County Councillor were present.

It appears that the reason for the pollution is the pumping of untreated sewage into the sea via the canal extraction pumps at Seabrook. True this was recently aggravated by a blockage in the pipe between Seabrook and Hyhhe, but I am informed that there is in any case the sewage which has to be carried from the Horn Street area to the Hythe works is in excess of the pipe capacity, and hence the constant use of the Canal pumps (which were installed as an emergency measure to be adopted on those rare occasions when excess rain water ran into the Horn Street drains.)

I also understand that the reason for the present state of affairs is the considerable building which has taken place in recent years along Horn Street which produces sewage surplus to that for

which the system was designed.

Responsibility for sewage now rests with the Southern Water Authority who are not directly responsible to any local or county authority. According to our County Councillor's understanding the Southern Water Authority plan no remedial action for at least two years when they plan to construct a new sewage works at a cost of several millions of Pounds and no doubt, a rise in Water Rates.

Pressure is being brought to bear on both County and District level to improve on this, but the Conservative Committee suggested that the Sandgate Society in conjuntion with the Hythe Civic Society should invite the Southern Water Authority to an open meeting so that the facts may be ascertained, and that the residents in the neighbourhood may impress upon the Authority the highly unsatisfactory present state of affairs and the need to take at least interim action to avoid the dumping of untreated sewage into the sea.

The reason for preferring the Sandgate Society/Hythe Civic Society as sponsors is that being non-political organisations there is less risk of turning the matter into a political issue. I am reasonably confident that enough pressure can be brought to bear on the Authority through our MP, County Councillors and District Councilhors to ensure that a senior representative of the Southern Water Authority attends to outline the facts, their proposals and listen to our comments.

Yours sincerely

Richer. Es

P.S. I presume you are aware that it is the intention to build flats and the public library on the site set aside for the public library in 1981 and then to dispose of the Old Fire Station. I am informed by Captain Lawrence that if normal procedure is followed the freehold of the Fire Station will be offered to the Society as sitting tenants. This looks like another capital project of some magnitude if the Sandgate Society wishes to purchase the Freehold, and, should that t be so, I suggest it would be worth trying to negotiate a price before it inflates by another couple of years and to contemplate the necessary fund raising.

ecology party

THE ECOLOGY POINT OF VIEW

Considerable concern and interest has been expressed in recent months over Southern Water Authorities plans to improve methods of dispesal of our sewage.

The basic facts are well known, their being two basic alternatives.

- 1. Inland treatment in a conventional treatment works.
- 2. A long outfall pipe with screening and maceration treatment.

By their structure Southern Water Authorities essential considerations are cost effectiveness and ensuring an acceptable level of pollution, and are therefore looking at the problem in a degree of isolation. If, as a society, we can spend millions on breaking down the atmom in a nuclear power station, it is only proper that the public monitor just as carefully the effect our waste has on the environment.

The current proposals include some screening and maceration. However, it is not apparent what percentage of solids are removed or what happens to them. Considerable emphasis is placed on the seas ability to break down sewage maturally. However, this process is at its most effective in warm, sunny weather, not exactly our most frequent conditions. In calm, humid, or cloudy weather this process is much slower, what studies have been done off our cost?

No mention has been made as to the percentage of chemicals from household waste which ranges from washing up powder to unwanted pills that we flush into the system. What studies have been done in this respect?

As consumers the public is apathetic as to what heppens to our waste, perhaps we should also control what we flush away by purchasing non-chemically based products which are becoming more readily available.

With regard to inland treatment, Southern Water have chosen not to publish their reasons for rejecting this alternative. Has consideration been given to the possible benefits, ranging from additional fresh water, sewage is 70-90% water content, useful utilisation of Ministry of Defence land.

The whole subject is obviously very complicated, however, we feel the topic is too important to be left purely to Southern Water Authorities exerts, who make recommendations with limited objectives. For Shepway Council and the public to express a considered opinion we need all the facts in writing.

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The sea represents an enormous bonus to Hythe, both aesthetically and financially, we can ill afford to run the risk of ruining it.

Local Contact

David Conder

2 Blooder Cottages Looting Lone
Adishan

Kent CT3376

SOUTHERN WATER AUTHORITY

MAJOR IMPROVEMENTS FOR SEWERAGE AND SEWAGE DISPOSAL AT HYTHE

Southern Water Authority is fully aware of the unsatisfactory sewerage and sea outfall disposal arrangements which have existed at Hythe since long before the formation of the Authority, and it places a very high priority on resolving them.

However, this is only one of many similar unsatisfactory sea outfall situations throughout the region. Expenditure of £150 million is required to resolve only the most severe of these problems.

Recognising the magnitude of this problem, Southern Water Authority has provided in its capital programme for spending half as much money again on resolving the problems of sea outfalls as had been possible previously, bringing expenditure up to £8 million per annum, whilst at the same time ensuring that its charges for water services are kept within the level of inflation. Even this increased expenditure means it will be nearly 20 years before all of the worst sea outfalls are eliminated.

Nevertheless, £7 million has been made available to resolve the Hythe sewerage and sewage disposal problems over the next two years and it is imperative therefore that work is commenced in the spring/early summer of 1983.

The problems at Hythe are:-

- (a) The inadequacy of parts of the existing sewerage system leading to localised flooding under storm conditions.
- (b) The unsatisfactory disposal of sewage via the existing short sea outfall.

Detailed consideration has been given over a number of years to a variety of schemes for the disposal of sewage throughout the coastal area between Folkestone and Dymchurch and it has been concluded that it would be best if Hythe is dealt with as a separate sewerage and sewage disposal scheme.

Sewerage

The proposals for dealing with the sewage flooding problems in the areas of Horn Street, Seabrook Road, Orchard Valley and the Town Centre, includes the provision of a pumping station in the vicinity of the Seabrook Outfall of the Royal Military Canal, which would deal with the entire sewage flow from the Elham Valley area pumping all the sewage westwards through a new pumping main to be constructed along Princes Parade. The existing overflows at Seabrook outfall would no longer be essential, but would be retained in case of extreme emergencies. The remainder of the trunk sewerage system of Hythe would be improved and supplemented as necessary and would drain to a new pumping station to be constructed at Reachfields.

Sewage Disposal

The alternative means of the treatment and disposal of sewage either via a new long sea outfall or a sewage treatment works have been thoroughly appraised and there are two main advantages in proposing a new long sea outfall, and the two are interdependent.

Firstly, sewage treatment works basically remove suspended solids and the organic content of sewage, but there remains a very high bacteriological load in the effluent that is discharged and substantial dilution in the receiving waters together with natural processes are required to complete its full treatment.

At Hythe, any local discharge from a sewage treatment works would result in the beach not complying bacteriologically with the EEC standards for bathing waters.

A properly designed long sea outfall would include preliminary treatment of screening and maceration. The sea outfall would be of such a length and so positioned that the sewage, including the small particles of organic matter, would receive not only tremendous dilution and dispersion, but the natural treatment processes from sunlight, salinity and other organisms would ensure full compliance and specifically bacteriologically with EEC standards.

Secondly, the costs of construction plus the day to day running and maintenanace costs of a sewage treatment works are very substantially higher than those of a long sea outfall and this is quite apart from the fact that the very high bacterioloigcal content of a sewage works effluent would be unacceptable.

The environmental impact of a sewage treatment works close to an urban area with the associated problems of sludge disposal and smell nuisance are additional important factors.

Initial sea surveys have been carried out to determine the degree of bacteriological reduction on the shoreline from a sea outfall of 1, 2 or 3 km in length, and these indicated 2.5 km as the required length. A subsequent survey has confirmed that an outfall of 2.5 km length will ensure full compliance with EEC standards.

The Ministry of Agriculture, Fisheries and Food, in consultation with local fishing interests, has indicated that from a fisheries point of view, a 2.5 km long outfall would be preferable to a longer one.

A public meeting to be chaired by the Chairman of Southern Water Authority, Sir Godfrey Taylor, has been arranged at Hythe Town Hall at 7.00 p.m. on Monday, 21st February to further explain the proposals.

Somerville Lodge REGINALD TURNILL Hillside SANDGATE 0303-39012 Kent 17 September 1980 The Editor THE FOLKESTONE HERALD Dear Sir I was not alone in feeling appalled at the Sandgate meeting on Wednesday addressed by two officers of the Southern Water Authority. While they admitted that sewage pollution in Hythe, Seabrook and Sandgate is the most serious in their whole area, they appeared to have little idea of what to do about it. While dismissing newspaper articles about the possibility of disposing of sewage farm residue on a commercial basis as fertiliser (based on proposals by experts just as qualified as themselves), they expected us to believe that running a pipeline carrying untreated sewage to a point (2) kilometres directly opposite Hythe would neither poison the fish nor later be washed ashore. The proposed pipeline is to be directly opposite Hythe because the Authority apparently expects protests from Hythe residents to be more easily overcome than opposition from the Ministry of Defence to running a pipeline through the much more accessible but apparently sacred waters of the neighbouring firing range. The fact is that we in this area are living dangerously in our own ordure, while paying frighteningly large sums to both the Water Authority and the Shepway Council to get us out of it. Wednesday's meeting made it perfectly clear that unless the civic societies of Folkestone, Sandgate and Hythe get together and insist on a long-term solution being tackled now - and that MUST be a sewage treatment plant - it will be human beings as well as fish that will soon start to die. Yours sincerely (Reginald Turnill, Sandgate) PS PLEASE DO NOT PUBBISH THE FULL ADDRESS. Copy: The Chairman The Sandgate Society

High and mighty

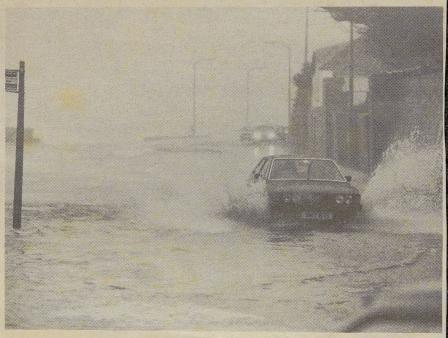
By Rona Reimann

FORTY foot crashing waves, storm force winds, mounds of shingle thrown up on the road . . . these were the conditions which Sandgate had to put up with in last Wednesday's violent storm.

These pictures by the Herald's Brian Newcombe give some idea of how bad the weather was, particularly for those motorists caught in the midst of it.

For the full story of the havoc causes, turn to Page 13.

Storms lash coast road



SHEPWAY'S "Indian summer" came to a sudden end on Wednesday as rain and storm force winds lashed the coast. With another high tide forecast

the same night, Shepway Council lorries delivered sandbags to residents of Sandgate, where the main road was closed due to flooding (above). See story on page 3. ABOVE: This
 Metro found the road
 at Sandgate
 resembling a river.

RIGHT: The seafront at Hythe takes a battering.



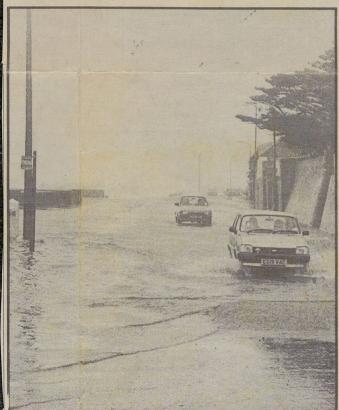
Wave spouts up



Seabrook's tea bar is dwarfed by a huge wave.



• Cars crawl through flood water at Seabrook.



MORE than three inches of rain fell on Shepway during the week ending Saturday, October 10. Weathermen measured 83.4mm (3.28 inches) with the wettest single day Wednesday, October 7, at 35.5mm (1.4 inches). Temperatures fell to a low for the week of 4.1C (39.38F) on Wednesday.

Sea hits high at motorists



(29)

Sandgate People

September 1996

The Newsletter of the Sandgate Society

The Flood

Two weeks after the Great Flood of Monday, August 12th, 1996, a once in 500 years occurrence (or so we are told), Sandgate is back on its feet. Nearly all the shops are open and only the sandbags, a few piles of damp and discarded furniture on the pavement and new carpets being fitted, betray the fact that the village was hit by a tidal wave of water 2/3 feet deep flowing remorselessly down the High Street – not the old enemy, the sea, this time, but rainwater coming from the neighbouring hills and finding no outlet.

"It was like Venice" said Reg Chapman of Sandgate Hardware and indeed a boat was rowed down this new waterway. Torrential rain had fallen ceaselessly for two hours. Mrs. Norden Black of Norden Antiques, who had 51/2 feet of water in her cellar, is clear as to the cause of the flood and her opinion is shared by others. She had already complained that the large outlet pipes in the sea wall had been cut back and effectively reduced in diameter by rubber nozzles and the drains seemed to be blocking with only a small downpour. The shingle, perhaps augmented by the beach replenishment scheme, had finally buried the pipes altogether, and the drains were useless. By 12.30pm. JCBs sent by Shepway had uncovered the buried pipes and the water level fell immediately. Michael Howard and the Shepway engineer came the next day and the pipes were extended as they had been previously.

Many shopkeepers were able to barricade themselves as in a siege with storm boards and sandbags. At the Antiques Market the carpets were ruined by sewage but little damage was caused to stock. "Laura's Legumes" needs a new floor but the vegetables were saved. The Rowlandsons at the Post Office spent several hard days clearing and sweeping with 5" of water inside the shop and 2ft.

outside. Traffic was at first moving during the floods and this created waves which flooded over the boards.

At the "Ship" Inn Wendy Whiffin was given assistance by the staff of the garage who cut up and disposed of her dripping carpet and by evening things were back to normal, save that her floor, like an old-fashioned inn parlour, is temporarily strewn with sawdust. Both she and Dan Richards of the Norfolk Hotel gave sandwiches and coffee to the firemen who performed their duties admirably. Dan Richards heard the ragstone wall of Enbrook collapse, pushed outwards by the weight of water, "like a bomb going off."

The worst damage of all was at Cliffe Cottage, Castle Road, the home of Mr. This rambling and and Mrs. Cole. picturesque house, made up of three fishermen's cottages, dates from 1740 and is several feet below modern street level. The whole house was inundated. cellars, containing valuable equipment, were full of water, mud and sewage to the ceilings and there was 4ft. of water in the newly restored kitchen and living rooms. There is a 10ft. hole in the garden and a new car was ruined. Mrs. Cole and her grandsons, aged 8 and 11, retreated to the upper floors. "We made a game of it and they were not frightened," she said, but an expectant mother staying with her tried to swim out. The Coles are now back and overseeing the necessary repairs.

New Members

Welcome to: Mr & Mrs de Marne, Mr & Mrs A. Jones, Mr & Mrs Armon, Mrs Foreman, Mrs C.Hughes, Mr & Mrs Hounsell, Mr M.R. Harvey Environmental Services, Civic Centre, Castle Hill Avenue, Folkestone, Kent CT20 20Y Telephone: 01303 850388

Fax: 01303 258854 DX 4912 Folkestone



Your Ref.

Our Ref. mek205/Miss Raizer

Ext. No. 362

Date September 1995

TO: ALL PROPERTIES IN HIGH RISK AREAS IN SANDGATE AND HYTHE

Dear Sir/Madam

FLOOD PREVENTION - PROVISION OF SANDBAGS

The coast protection works to prevent flooding and erosion in Hythe and Sandgate are now being constructed. These works are due to be completed in 1996. Until the works are completed you are advised to take your normal precautions to avoid the possibility of your property being flooded, although in areas where the beach nourishment has already been completed this may not be necessary.

As we are now approaching the time of year when there is more likely to be a combination of high tides and adverse weather conditions, I would like to remind you of the Council's policy regarding the provision of sandbags, which is as follows:-

1. That you may collect filled sandbags from Shepway Contract Services Depot at Ross Way, Military Road, Folkestone, free of charge, during normal working hours:-

Monday to Friday

6am - 5pm

Saturday

6am - 12 noon approximately 6am - 9am approximately

Sunday

Residents wishing to collect free sandbags from Shepway Contract Services should telephone SCS to check availability and opening hours 01303 220006 before travelling.

- 2. That filled sandbags may be delivered on request only to householders who are unable to collect, on the basis of one issue per annum. These sandbags will be issued week commencing 18 September 1995. A delivery charge will be made although this will be waived for householders in receipt of benefit.
- 3. That new plastic sandbags (issued since 1993) should be retained for possible future use.
- That the Council does not normally collect sandbags. 4.

There can be no guarantee that the Council will be able to held with the supply of additional sandbags during a flooding incident. Please ensure that you take this opportunity to secure the protection of your property.

If you require a delivery of sandbags, please return the enclosed reply slip by 15 September 1995. If you have any queries please contact the Helpline on 01303 850388 ext. 432.

I enclose guidance notes which are intended to provide a reminder of arrangements and precautions that residents can take to reduce potential damage that can occur from flood waters. Whilst I hope your property will not be affected by flooding, please keep this information in a safe place for future reference.

Yours faithfully

Director of Environmental Services

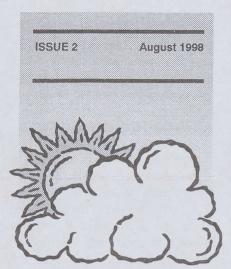
Reply	Slip		
Name:			
Addres	ss:		
Teleph	one:		
If residents, who are not in receipt of benefit, wish the Council to deliver sandbags, the following fees will have to be charged:			
	Folkestone and Sandgate	-	£15
	Hythe	-	£20.
I require a delivery of (please state quantity) filled sandbags and confirm that I am unable to collect them.			
*	I agree to pay the delivery charge of £ by cash or a cheque with cheque guarantee card to Shepway Contract Services at the time of delivery.		
*	I am in receipt of benefit and my benefit number is		
	(please delete as applicable)		
Signature:			

Deliveries will be made week commencing 18 September.

In order to receive your delivery please complete this form by 15 September 1995 and return to:

Helpline Service
Environmental Services Department
Shepway District Council
Civic Centre
Castle Hill Avenue
Folkestone
Kent
CT20 2QY

SHEPWAY DISTRICT COUNCIL



SILVER LINING TO FLOODING PROBLEMS

Shepway District Council has approved funding of £1.9 million for flood protection measures on watercourses in Folkestone and Hythe.

Detailed design of these measures is nearing completion and the necessary approvals and consents are in place.

Construction works are expected to commence later this summer and will continue for approximately 9 months.

"FAST TRACK" TO SUCCESS

The design process has been carried out on a "fast track" basis. This approach has been

Flooding Update

extremely successful and will allow construction to commence within just 2 years of the district's worst recorded flooding event, which occurred in August 1996.

A NEW PARTNERSHIP!

To achieve results in record time the Council's own engineering services section joined forces with Bullen Civil Engineering Consultants of Bradford.

Together they considered a variety of flood protection options for Folkestone and Hythe. After careful consideration detailed design was undertaken for the following improvements.

IMPROVEMENTS IN YOUR AREA Pent Stream – Folkestone

• Morehall Recreation

Ground

Approval has been obtained from Southern Water to construct a new flood relief culvert to channel storm flows from the Pent Stream into the Public Surface Water Relief Sewer that serves the Channel Tunnel Terminal.

In addition the existing 130m long open channel section of the Pent B which crosses the recreation ground will be culverted, the flood storage area filled in and the playing field reinstated for recreational use.

 Moat Farm Road, Park Farm Road and Watkin Road

The replacement of 145m of damaged culvert and the construction of a new flood relief culvert from Moat Farm Road to the Pent B in Pavilion Road.

• Pavilion Road to Tontine Street

Repairs and relining of damaged sections of the existing culvert, which carries the stream from Park Farm Road to its point of discharge into the harbour at the southern end of Tontine Street.

Enbrook Stream - Sandgate

Extensive consultation is taking place with Southern Water to establish responsibility for the stream and to programme the proposed works to coincide with Southern Water's own improvements to the public sewers in the area.

Proposals include the construction of a replacement outfall structure onto the beach at the end of Martello Terrace and the enlargement of the existing culvert beneath the High Street, Castle Road and Martello Terrace.

Seabrook Stream – Horn Street

• Craythorne Close

Improvements are proposed at the old millpond west of Craythorne Close. These will include the installation of a new weir arrangement and construction of an earth bund around the edge of the pond.

Mill Leese Stream - Hythe

• Mill Road and Hythe Watermill

Proposals include improvements to the embankments at the millpond, together with alterations to the mouth of the culvert beneath Mill Road.

These proposals may require the temporary closure of Mill Road during construction.

Mill Leese Stream Saltwood

An area of land to the west of Saltwood Castle known as Orchard Field Shaw Blackhouse Shaw has been chosen for the creation of a flood storage area. Storm flows from the Mill Leese Stream will be retained in this area and released through a controlled outfall device, which will be constructed at the entrance to the existing culvert, which passes beneath the disused railway embankment to the south west of the castle.

Brockhill Stream - Hythe

• London Road and Military Road

Improvements to the existing culverts and the provision of a new flood relief culvert in London Road together with the construction of a new outfall into the Military Canal.

WILL IT WORK?

These improvements will significantly alleviate the

problems associated with the above streams, but will not totally remove the risk of flooding.

During exceptionally heavy rainfall flooding could also occur due to problems with public sewers and highway drains, which are the responsibility of Southern Water and Kent County Council respectively. These organisations are aware of this risk and will determine their own response. For example, Southern Water Services are currently carrying out improvements to the wastewater system in Folkestone and Sandgate.

WHAT WILL IT COST?

It is estimated that the total cost of improvements to the streams will be £1.9million.

The Ministry of Agriculture Fisheries and Food, (MAFF), has approved an application for grant aid for 25% of the cost of the improvements to the Pent, Enbrook and Mill Leese Streams. The remaining 75% together will the total cost of works to the Seabrook and Brockhill streams will be funded by Shepway District Council.

WILL IT AFFECT ME?

The construction works will be carried out to a staggered programme, starting in Folkestone. Further information relating to works in your area will be provided, as it becomes available.

Property owners directly affected by the scheme will receive notice from the Council under the Land Drainage Act 1991 together with details of the proposals and advice on legal rights at least 6 weeks before construction works commence

It is the Council's intention to hold local meetings and issue newsletters to keep you informed of proposals before works start in your area.

WE WOULD APPRECIATE YOUR CO-OPERATION

The construction work will be completed as quickly as possible. Inevitably there will be some noise and disruption, although this will be kept to minimum. Your co-operation and patience during this difficult engineering project will be greatly appreciated. In the long term we are sure that the benefits the scheme will bring will outweigh any short-term inconvenience.

Useful Contacts in the event of flood

Southern Water Services Tel. 0845-2780845

Kent County Council (Highways)

For A259 Trunk Road Tel. 01634-361361

All Other Roads Tel. 01303-850388

Shepway Flood Warden Tel. 0468-272276



A ScottishPower Company

Technology

Dover & Folkestone Project Office

Your ref

Our ref

Date 1 September 1998

Contact

Mr Reginald Turnhill Somerville Lodge Hillside Sandgate Kent CT20 3DB

Dear Mr Turnhill

Dover & Folkestone Waste Water Treatment Scheme Sandgate Pumping Station and Flood Prevention

Please find enclosed further information regarding our proposals for sewerage system improvements in Sandgate. As you are no doubt aware Southern Water has been planning this work now for a number of months. One of the reasons for this has been our desire to limit the inconvenience to local residents and businesses. To that end we have revised our original designs to avoid any work within Sandgate High Street. Please note that our plans are still at the detailed design stage and may be subject to alteration.

These works are scheduled to commence in early 1999 and will continue until the Autumn 1999. During the work access for residents and emergency services will be maintained at all times. We are currently in discussion with Shepway District Council regarding a traffic management plan for the area during the work.

When completed the work will result in significant improvements to the bathing water quality off the coast at Sandgate and reduce the long-standing problems associated with flooding in the town.

I would be most interested to receive any information produced by the Sandgate Society and would be grateful if we could be added to your mailing list. Many thanks for your continued interest in this project; if you have any further questions please do not hesitate to call our main site office on (01304) 226539.

Yours sincerely

L. J. Kelley

Les Kelley Project Manager



Sandgate Pumping Station and Flood Prevention

1 Pumping Station

A new pumping station and valve chamber will be constructed approximately 13m east of the existing pumping station.

The valve chamber will be constructed entirely within the promenade and will be built in-situ of reinforced concrete.

The new pumping station will be constructed within the promenade and the Granville Parade carriageway and will be approximately 6m in diameter and 8m deep.

A new above ground pumping station control structure will be built on the promenade adjacent to the existing toilet block.

The existing Granville Parade pumping station, valve chamber and underground control chamber will be abandoned and filled with foam concrete or another suitable material.

2 Storage of Storm Flows

The existing Granville Parade storm tank is in poor structural condition and will be reconstructed to improve hydraulics and structural strength.

It is proposed that the roof of the existing tank is removed and a new reinforced concrete shell is built inside the envelope of the existing floor and walls. A new roof will then be installed.

3 New Sea Outfall



A new 600mm diameter outfall will be constructed on the line of the existing outfall which will be removed.

The new outfall will extend to below Mean Low Water Springs level (approx. 75m from the sea wall). It will be buried for most of its length. The final 20m at low water will be brought above the sea bed levels and supported on timber frame cradles. A simple diffuser will be provided at the end and a marker beacon erected to meet the navigation authority's requirements.

4 Sewerage Works

Sandgate Hill

Improvements to the sewerage system on Sandgate Hill will involve increasing the size of one section of the existing sewer and installing a length of new sewer in the remaining section of the road.

Lister Way

A new sewer will be laid down Lister Way and will connect to the existing sewer in Castle Road.

Castle Road

A new sewer will be laid along a line close to the centre of Castle Road to minimise disruption to the adjacent properties.

A new sewer has already been laid at the junction of Castle Road and Sandgate High Street to divert flows away from the High Street and Military Road. A 16m long section of tunnel will be built to extend this diversion to the Martello Terrace car park. The use of tunnelling in this area is designed to minimise disruption for nearby properties.

New manholes will be installed along the line of the sewer to provide access for maintenance.

Castle Road to the Pumping Station via the Martello Terrace car park in Granville Parade

A new 1200mm diameter sewer will be laid from Castle Road to the pumping station via the Martello Terrace car park. The section within the car park will be laid along a line that will minimise disruption to the adjacent properties.

The existing sewer at the west end of Granville Parade will be upsized to provide the required levels of storage within the system.

Sandgate High Street

Contrary to earlier plans, there will be no work carried out in Sandgate High Street.

NB - Please note that these works are still at the detail design stage and may be subject to alteration.