



NRA

*National Rivers Authority  
Southern Region*



NATIONAL RIVERS AUTHORITY / THAMES WATER UTILITIES LTD



## DARENT ACTION PLAN

**Public Statement to Accompany Application to Vary Groundwater Abstraction  
Licences at Sundridge, Lullingstone, Eynsford, Horton Kirby, Darent and Bexley**

### RESTORATION OF LOW FLOWS TO THE RIVER DARENT

40.17

**National Rivers Authority  
Southern Region  
Kent Area Office  
Millbrook House  
Mill St  
East Malling  
Kent ME19 6BU**

**November 1995**

ENVIRONMENT AGENCY



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## DARENT ACTION PLAN

### RESTORATION OF LOW FLOWS TO THE RIVER DARENT

#### INTRODUCTION

The implementation of a joint National Rivers Authority (NRA)/Thames Water Utilities Ltd (TWUL) Action Plan to restore low flows to the River Darent is under way. One of the most important aspects of the Plan is the reduction of existing licences to abstract groundwater at the following pumping stations operated by TWUL:

Licence Nr	Location	National Grid Reference
9/40/1/123/GR	Sundridge	TQ 4897 5568
9/40/1/122/GR	Lullingstone	TQ 5248 6280
9/40/1/125/GR	Eynsford	TQ 5358 6550
9/40/1/121/GR	Horton Kirby	TQ 5584 6800
9/40/1/133/GR	Darenth	TQ 5542 7189

and a temporary increase at:

9/40/1/130/GR	Bexley	TQ 4820 7280
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Maps 1,2 and 3 show the locations of the pumping stations.

Licence Nr 9/40/1/131/GR at Brasted, National Grid Reference TQ 4700 5574 has already been revoked.

This statement has been prepared to support NRA's application to vary the licences listed. A copy of the formal notification is attached in Appendix A and copies of the licences are attached in Appendix B.

In fulfilment of another important aspect of the joint Action Plan, the NRA will soon drill and pump test a number of boreholes close to the River Darent. It is intended that some of these will become 'artificial springs' to be used to augment very low flows. NRA's application to abstract water for this purpose will be the subject of a separate application to follow in due course.



## BACKGROUND

The Darent has long been popular with the public, who walk and picnic along its banks. However, the NRA has identified the 79km long Darent (Figure 1), which flows from Westerham to the Thames estuary, as suffering from serious environmental damage. Frequently during the past 40 years certain stretches of the river have become dry for periods lasting a few days to several weeks (Figure 2). This has been due mainly to periods of low rainfall exacerbated by licensed abstraction of groundwater for the public water supply.

Since the war, the groundwater resources of the Darent valley have been pumped increasingly to supply water locally and to south east London (Figure 3). All of the larger abstraction licences pre-date the 1963 Water Resources Act which introduced stricter regulation of water resources but also consolidated existing abstractions by making them 'Licences of Right'. These have allowed greater volumes of water to be taken than can be guaranteed in a dry year.

The Thames Water Authority - now Thames Water Utilities Ltd (TWUL) - recognised the problem in the mid 1980's and voluntarily agreed to abstract substantially less than the licensed amounts at six key riverside pumping stations in the Darent valley. This voluntary limit has been maintained ever since, even during the recent drought period of 1989-92, and since 1993 one of the pumping stations, Brasted, has been shut down.

Technical investigations by the NRA into the Darent low flow problem were initiated in 1990. Following on from these, in 1992 the NRA and TWUL formed a joint project team to decide how to return flow to the Darent while still safeguarding drinking water supplies to TWUL customers. In consultation with the Darent River Presentation Society, the NRA and TWUL devised a scheme to provide enhanced public recreation and ensure sufficient water levels - even during extreme drought - to sustain fish and river plant life.

This will be achieved by reducing TWUL's licences to abstract groundwater for water supply from the remaining five key pumping stations (Sundridge, Lullingstone, Eynsford, Horton Kirby and Darenth - Figure 4) and by the NRA augmenting the river during times of drought by pumping water into the river. If necessary, additional augmentation water may be imported into the catchment from the neighbouring Ebbsfleet area. In addition the NRA will encourage sensitive management of the river channel, banks and adjacent still waters to conserve their wildlife interest and recreational value whilst preserving the flood capacity of the river.

The need to safeguard public water supplies is vital and NRA and TWUL are working together to establish secure alternative sources to make up the shortfall in water supply that will be created by the reduced groundwater abstractions. This will involve TWUL modifying the network of water mains in south east London and north west Kent in order to import water from the Thames valley via the London Ring Main. It will also require an extension to the year 2001 of the present upward variation of TWUL's Bexley licence.

In achieving these objectives both the NRA and TWUL expect to make financial investments of up to £12 million in the enhancement and conservation of this beautiful area.

## THE DARENT CATCHMENT

The Darent valley has been a focus for human settlement and activity for many centuries, with prehistoric earthworks, Roman villas at Lullingstone, Farningham and Sutton-at-Hone, and medieval castles at Lullingstone and Eynsford. The lower valley is highly urbanised whereas the middle and upper areas have a rural character.

The River Darent rises near Westerham Kent, and flows eastwards towards Sevenoaks where it turns north in a wide valley through the North Downs before joining the Thames estuary at Dartford. As the greater part of the catchment is on permeable chalk (Figure 5), the river has few tributaries, other than the Honeypot and Watercress Streams, which join it north of Sevenoaks, and the River Cray which flows into the estuary.

Historical use of the River Darent for water power involved flow diversions which left very little 'natural' stream between mill ponds. Research has shown that there may have been as many as 30 mills in the catchment at various times. None of the surviving mills is in production now although eight of them do have operable sluices.

Although there were once extensive water-meadows between Otford and Hawley much of this land has been developed for housing or as gravel pits. Nevertheless, the valley still provides pleasant surroundings for informal recreation and the flooded gravel pits are valued as nature reserves, fisheries, or as sites for water sports.

The proximity of London has led to the catchment's groundwater being heavily exploited for public water supply and to a lesser extent for industrial and commercial abstractions concentrated in the Lower Darent and River Cray catchments. At times of low rainfall therefore (most recently in the prolonged drought of 1989-92), springs dry up, river flows are reduced and even fail. Dredging has been necessary to keep channels clear of the silt which has built up because of reduced flows. All of the larger abstractions pre-date the legislation (1963) regulating the management of water resources. These licences, combined with more recent ones, allow greater volumes of water to be taken than is replenished from rainfall in an average year.

Whilst the problems of low flows have received most attention in recent years, the catchment also has a history of flooding. Torrential rainfall in September 1968 caused extensive damage to roads, bridges and riverside property, but subsequent flood defence works have increased the river's capacity and reduced the risk. Tidal flooding from the Thames Estuary is controlled by the Dartford barrier, operated by the NRA. Extensive flood defence work has been done but some low-lying water meadows are still permitted to flood regularly, which preserves their value as wetland habitats.

Most of the urban waste water generated in the Darent catchment is intercepted by a trunk sewer running from Westerham to Long Ness, where it is treated and discharged to the Thames Estuary. Whilst solving pollution problems, this export of effluent from the catchment represented a significant loss of water resources which could otherwise be recycled to boost river flows and abstracted for re-use.

## **THE DARENT ACTION PLAN**

Following recognition of the Darent as a seriously over-abstracted river, the NRA undertook an extensive investigation into the problem of low flows. This coincided with the drought of 1989-92, when much of the river downstream of Farningham dried for prolonged periods. A Darent Action Plan was agreed with TWUL, designed to maintain an environmentally acceptable flow in the River Darent with the aim of restoring a breeding population of brown trout in the river.

The key to the Action Plan is agreement to maintain flows above certain minimum levels throughout the length of the river (Figure 6). The minima are based upon estimates of what natural flow would have been in 1976 (the most extreme drought on record) if there had been no abstractions. According to ecological surveys of the river and simulation models of the flora and fauna, these estimates correspond with the minimum flows necessary to support brown trout.

There are four main components of the Action Plan

### **(i) Reduced Abstraction of Groundwater**

An important finding of the NRA technical investigations was that reductions in water taken from the Lower Greensand area, upstream of Otford, should benefit flow in the River Darent directly. Therefore licences at two TWUL pumping stations in this area, Brasted and Sundridge - which have a total authorised abstraction of 18,160 cubic metres/day - are to be dramatically reduced to 1359 cubic metres/day. Indeed, TWUL have already voluntarily shut down the Brasted pumping station and the corresponding licence has been revoked. The NRA is also negotiating with West Kent Water Company for a reduction in the quantity of water abstracted from the Cramptons Road pumping station near Sevenoaks, which also takes water from the Lower Greensand aquifer.

The investigations also found that there are benefits in reducing quantities of water taken from four pumping stations which draw on the chalk aquifer in the Lullingstone-Eynsford area. The total existing licensed amount at these four stations is 60,460 cubic metres/day. Initially it is proposed to reduce this to 50,600 cubic metres/day. In the future, it is possible that the permitted amounts at these sources will be reduced even further if alternative water sources can be developed.

Under the provisions of a Water Resources Management Scheme agreed between NRA and TWUL, actual pumping at the selected pumping stations will be limited to 32,000 cubic metres/day during periods of normal demand in winter. This will amount to only 41% of the present licensed total of 78,620 cubic metres/day; a substantial reduction which will go a long way towards maximising winter recharge of the groundwater reservoirs, allowing them to better withstand the impact of summer demand and sustaining greater low flows in the river.

### **(ii) Modifications to Water Supply Pipelines**

TWUL will change the pipeline network in south east London and north west Kent to maintain the security of supply by importing water from River Thames surface sources via

the London ring main.

The first change will be the construction of a pumping facility at Farnborough, near Orpington, and a new pipeline from Farnborough to an existing service reservoir at Knockholt. Water from Farnborough will then replace most of the water that in the past was pumped from Brasted and Sundridge.

The second change will be modifications to the water supply infrastructure in the Eltham-Bexley-Dartford area to replace water that is presently provided from Eynsford, Horton Kirby and Darent. The most likely option will be to import Thames valley water via the London Ring Main possibly combined with increased abstractions at some of the existing pumping stations in these areas at locations where groundwater is still plentiful. But in the meantime there will be greater abstraction from TWUL's Bexley pumping station.

### **(iii) Artificial Springs**

The NRA is to drill and test up to six boreholes close to the River Darent between Lullingstone and Dartford starting in January 1996. It is intended that these will become artificial springs which will be used to augment low flows in the River. They will operate during drought conditions when the water table in the chalk is well below river bed level throughout much of its length. Under these circumstances water is lost downwards through the river bed. When the loss becomes excessive and flows fall below the target levels, water will be pumped into the river from the artificial springs.

The artificial springs will be unobtrusive and located where they can best benefit conservation and amenity sites which depend upon adequate river flows and at the same time have minimal effect on other water users. They will provide only limited quantities (typically about 2500 cubic metres/day each) in order not to unduly undo the benefits of the reduced abstractions from the TWUL pumping stations.

It is possible likely that additional augmentation will be required to meet the target flows. Preliminary studies have shown that this could be found in the Ebbsfleet area and imported to the Darent by pipeline. The Blue Circle Industries (BCI) chalk quarrying operation at Northfleet, which has been developed over the last century, requires significant volumes of groundwater to be pumped to waste into the Thames. It is proposed that this water be re-used by piping it for discharge into the river subject to the outcome of feasibility studies and approval from the Department of the Environment.

### **(iv) Water Resources Management Schemes**

Two Water Resources Management Schemes (WRMS) are proposed under Section 20 of the Water Resources Act 1991. These will be legally binding operating agreements registered with the Secretary of State for the Department of the Environment.

The first scheme will commit TWUL to joint use of River Thames and Darent underground water to meet demand in south east London and the Darent valley. By normally using more surface water from the Thames valley than borehole water from the Darent valley, especially during winter, underground reserves will be generally less taxed and flows in the river better



sustained.

Inevitably, in a severe drought the quantities of water contributed by boreholes will have to increase to help meet extreme demand, as happened in the summer of 1995. However, normal use of boreholes under the new arrangements will mean ground water levels will be higher at the inception of a drought and the impact on the river of such temporarily high abstraction rates will be much less noticeable.

The second WRMS will involve a joint assessment of the effectiveness of the Darent Action Plan. In anticipation, the NRA will continue to monitor underground water levels and assess the adequacy of the target river flow. TWUL will continue to develop leakage control measures and demand management strategies with a view to reducing future water consumption.

#### **v) River Management**

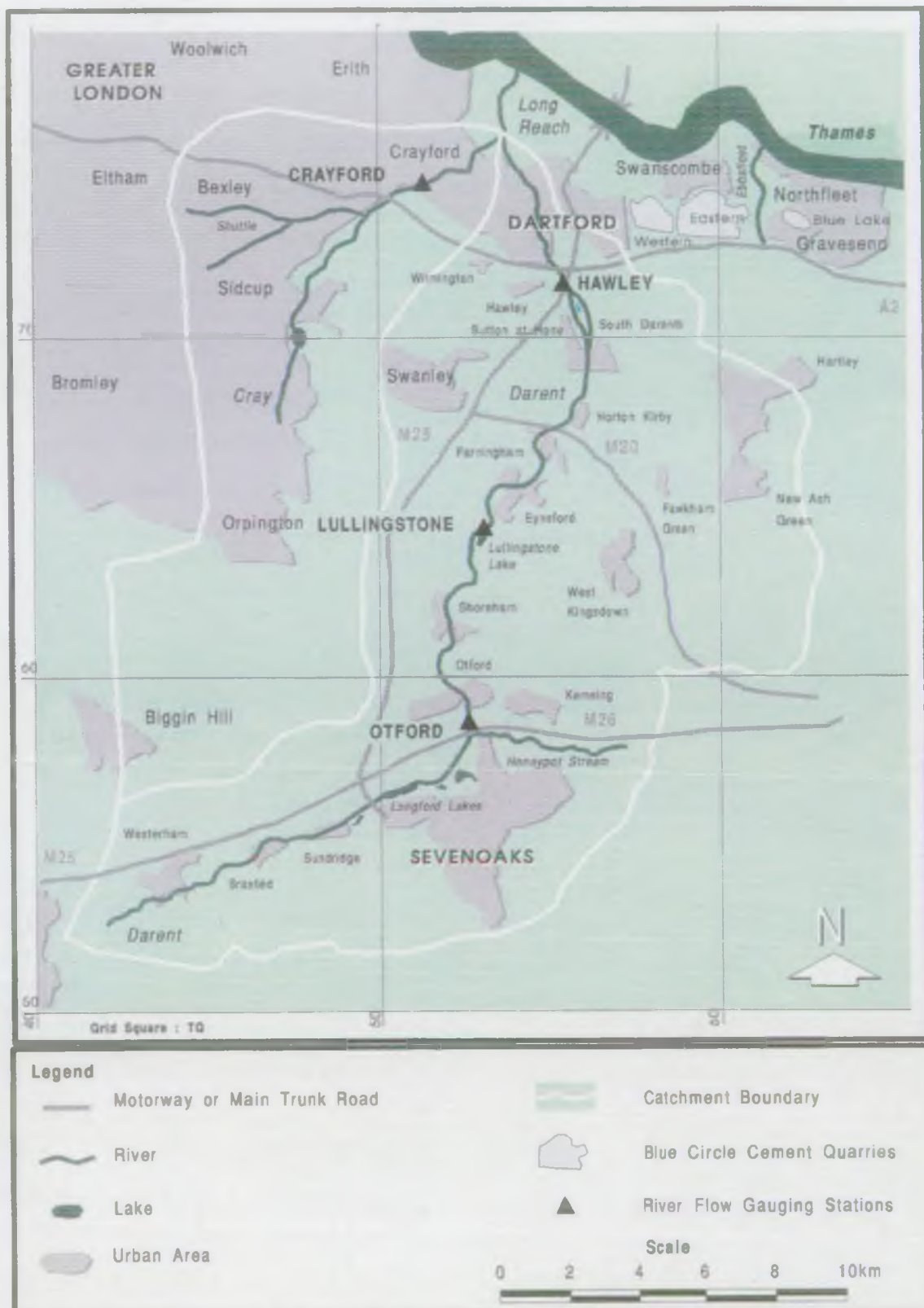
In addition to implementation of the Darent Action Plan, enhancements to the Darent valley environment are being carried out by the NRA as part of its routine duties and also by part funding of Kent County Council's 'North West Kent Countryside Project'.

To accelerate recovery from the 1989-92 drought the NRA has restocked the river with fish and constructed a number of small weirs to create flow conditions favourable for the fish. Other weirs have been constructed at Eynsford and South Darenth to maintain river amenity during dry spells. There is also a rolling programme to clear silt and unnecessary weeds from the watercourse but at the same time maintain the river's ecology.

Based in Dartford, the Countryside Project carries out activities to enhance the general rural environment using volunteers and sponsorship mainly from the NRA, but also from the Countryside Commission, Kent County Council, Sevenoaks District Council, the London Borough of Bexley, Dartford Borough Council and Gravesham Borough Council. In the Darent valley, achievements include the upkeep of stretches of the Darent valley footpath, construction of small weirs, rehabilitation of river banks and re-establishment of hedgerows.

**APPENDIX A**  
**FIGURES AND MAPS**

# LOCATION OF DARENT AND CRAY CATCHMENTS









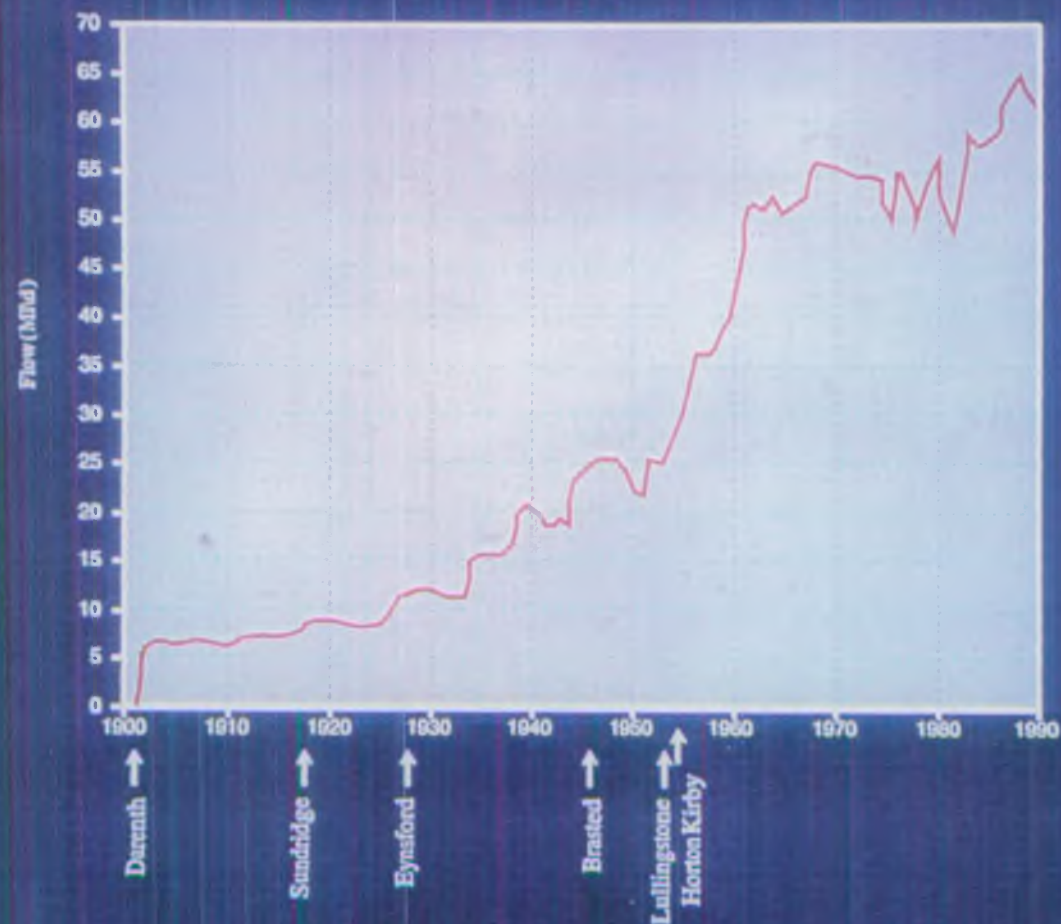
Westminster Mill, Horton Kirby - August 1990



Westminster Mill, Horton Kirby - August 1995





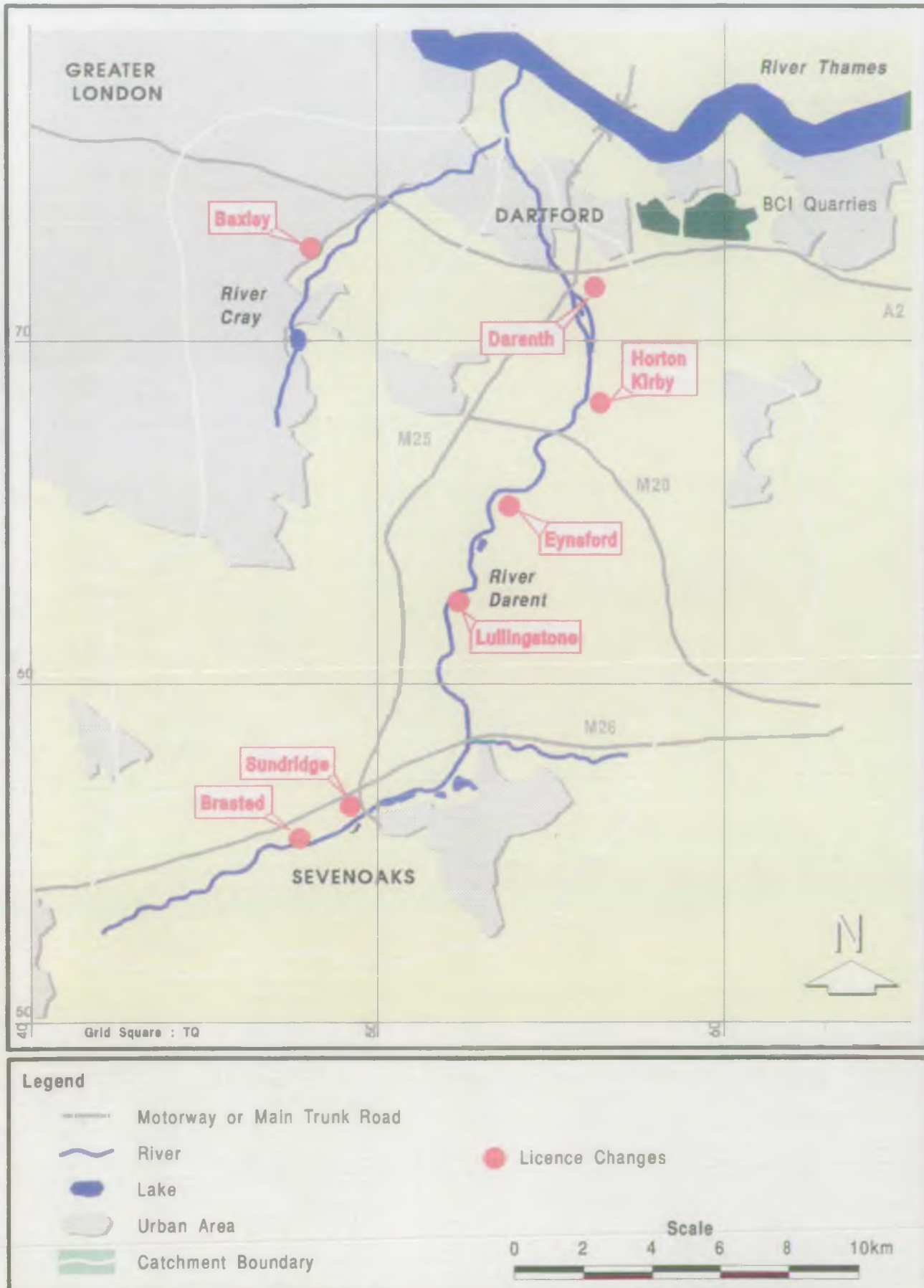


**River Darent**  
Increase in Thames Water Borehole Abstraction 1900-1990





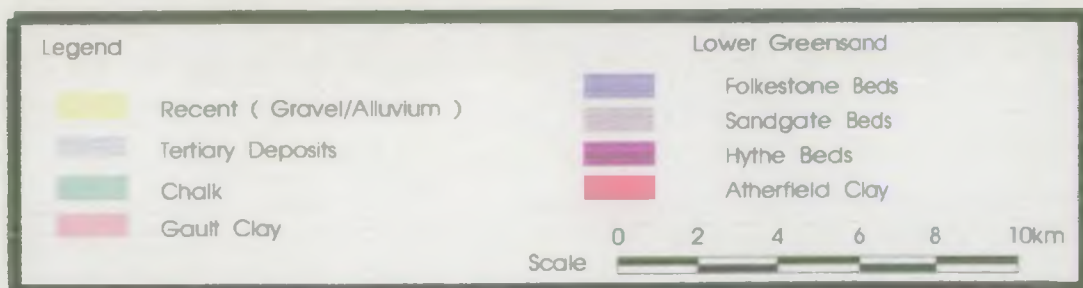
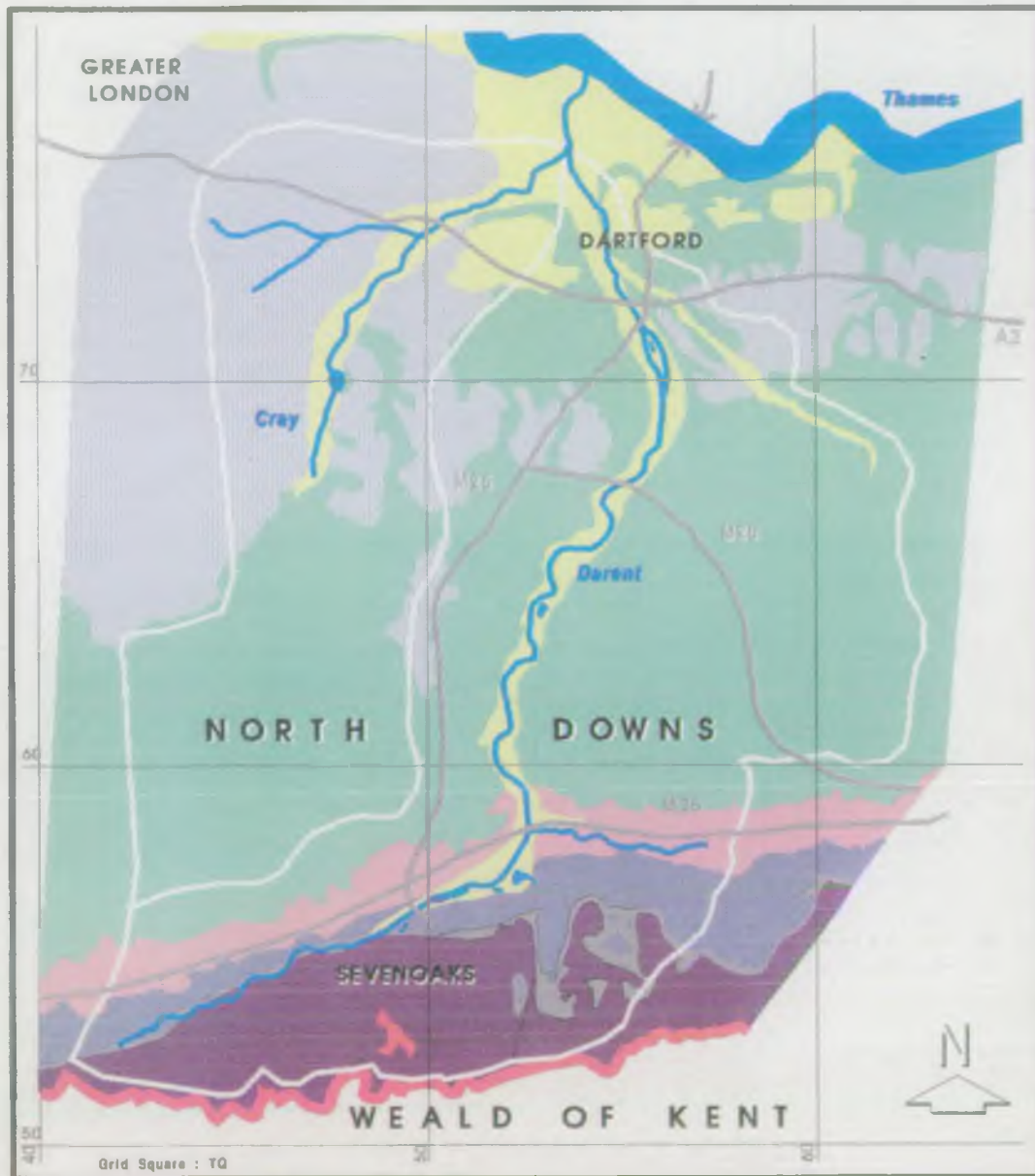
TWUL Abstraction Licence Changes included in the Darent Action Plan





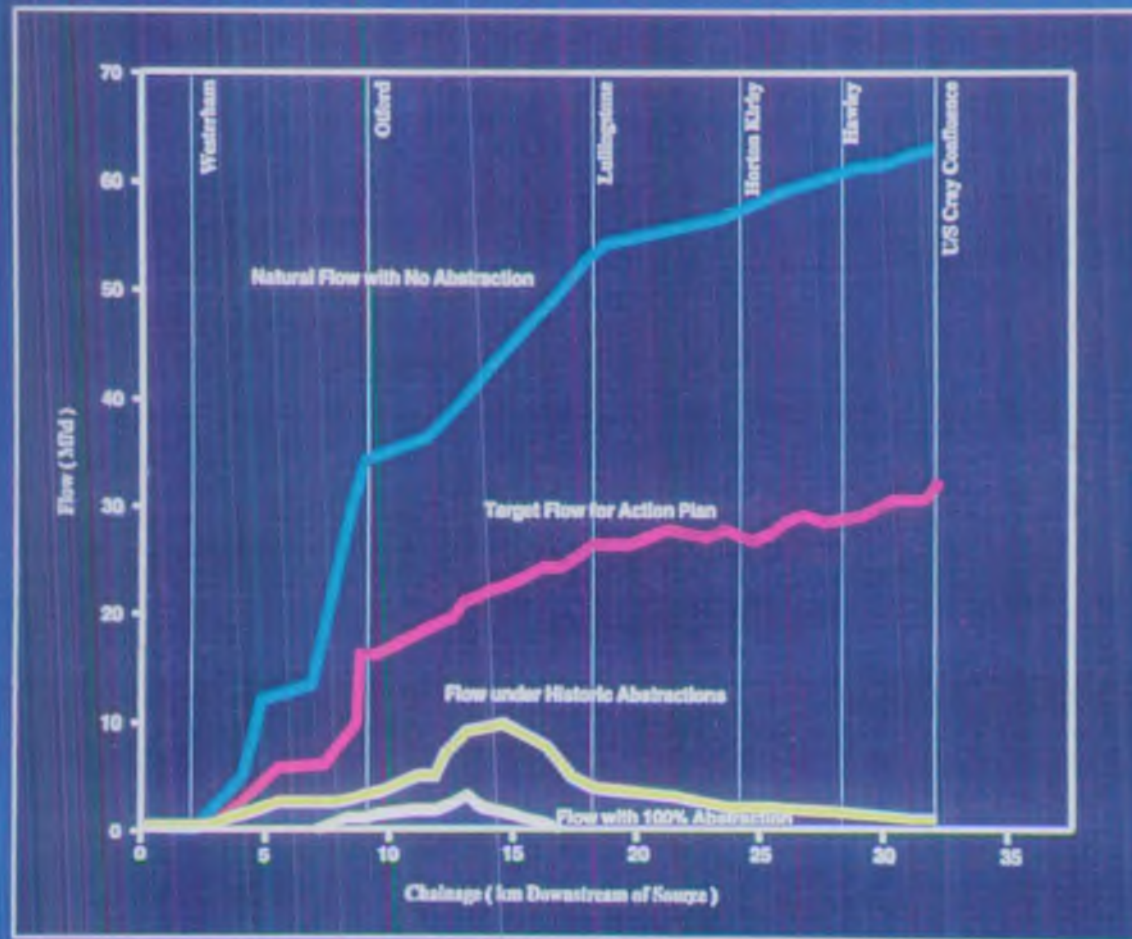


Geology of the Darent & Cray Catchments









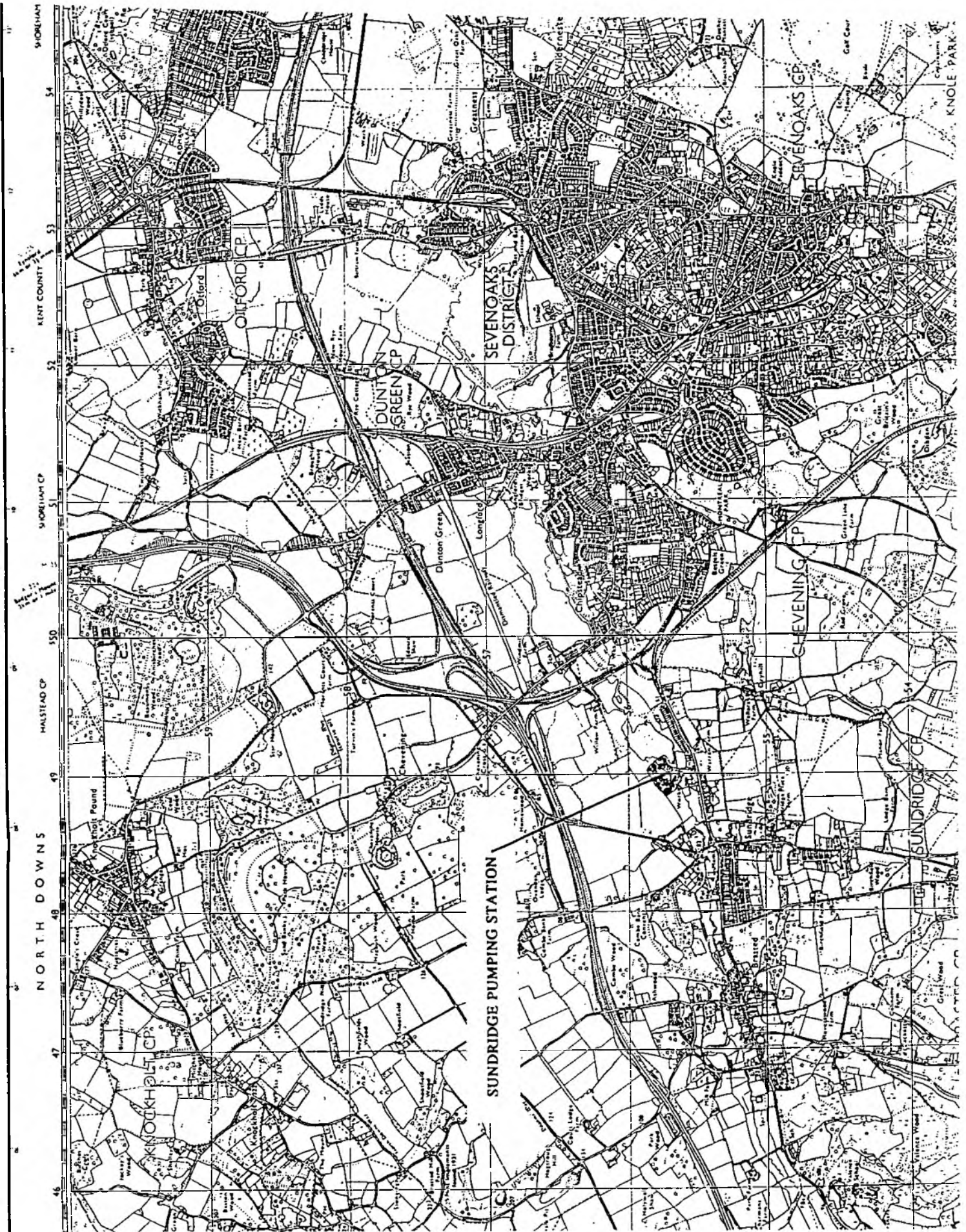
Comparative Low Flow Profiles in the River Darent  
For 1 in 20 Year Drought





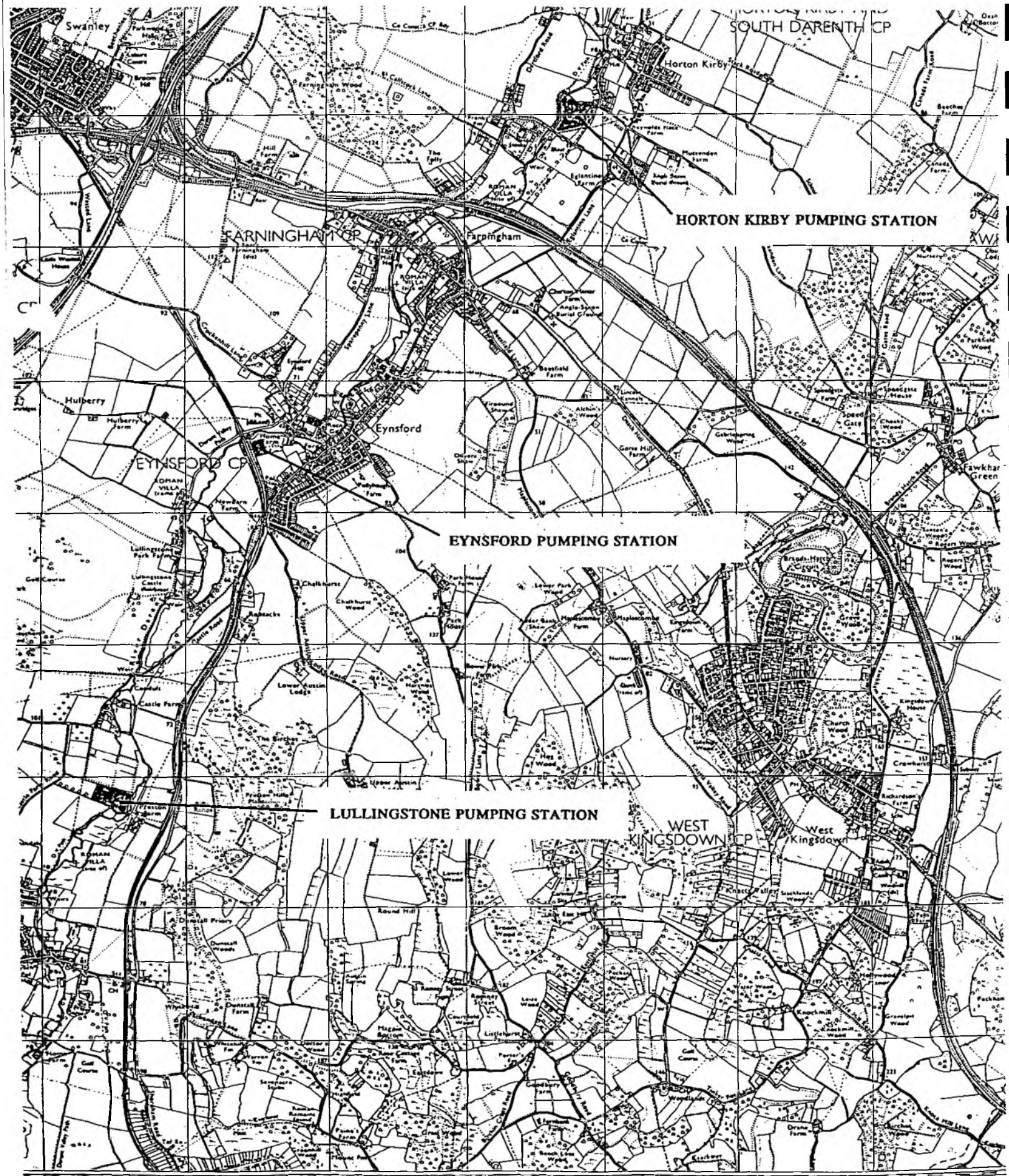
TWUL Abstraction Licence Changes included in the Darent Action Plan

SEVEN OAKS AND WESTERHAM

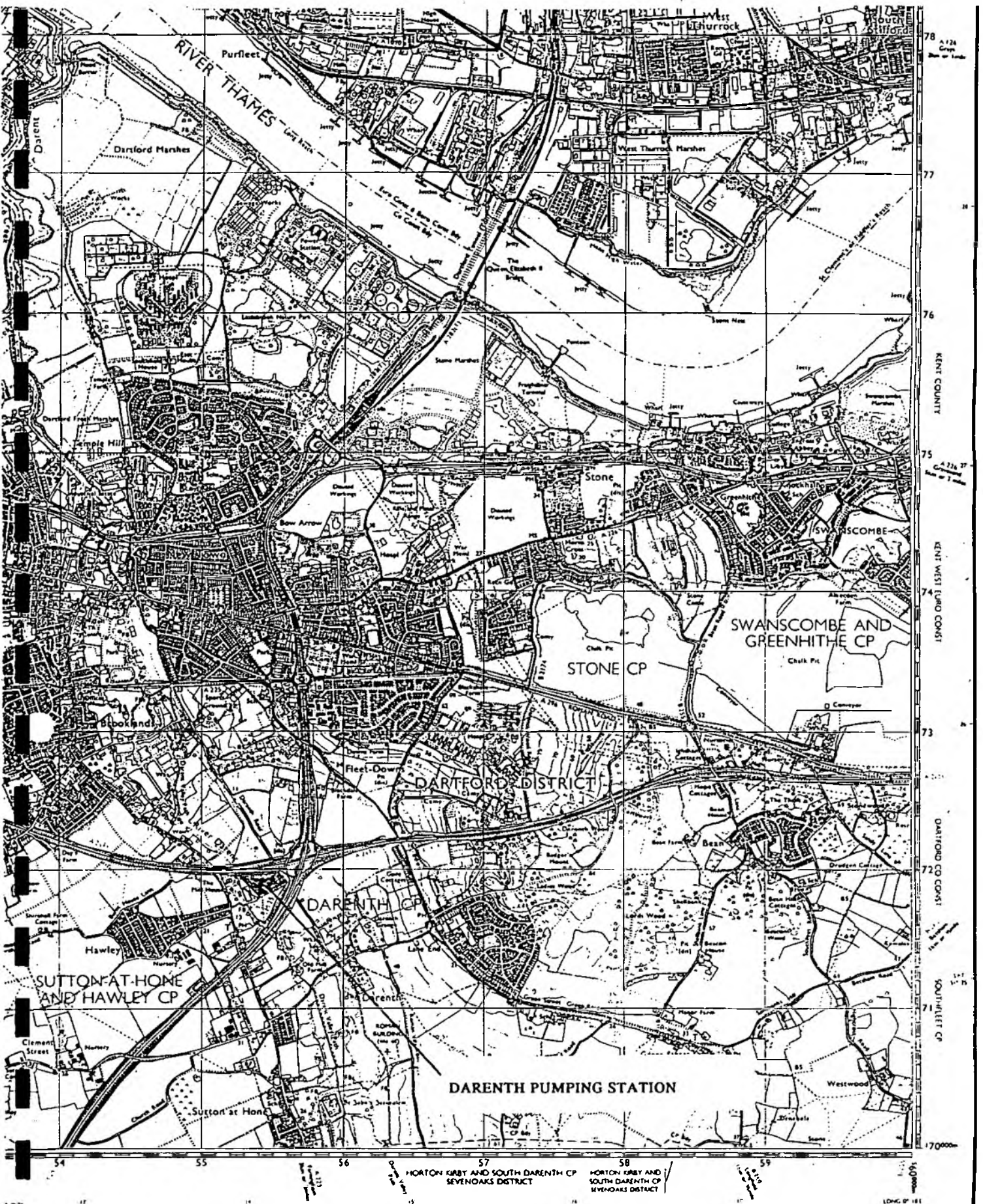




TWUL Abstraction Licence Changes included in the Darent Action Plan



TWUL Abstraction Licence Changes included in the Darent Action Plan





**APPENDIX B**  
**NOTIFICATION OF LICENCE VARIATIONS**



**NATIONAL RIVERS AUTHORITY**  
*Southern Region*

**RESTORATION OF LOW FLOWS TO THE RIVER DARENT**

**INTRODUCTION**

The Darent has long been popular with the public, who walk and picnic along its banks. However, the National Rivers Authority (NRA) has identified the 79km long Darent, which flows from Westerham to the Thames estuary, as suffering from serious environmental damage. Frequently during the past 40 years certain stretches of the river have become dry for periods lasting a few days to several weeks. This has been due mainly to periods of low rainfall exacerbated by licensed abstraction of groundwater for the public water supply.

Since the 1940s pumping from groundwater in the Darent valley to supply water locally and to S E London has increased dramatically. All of the larger abstraction licences pre-date the 1963 Water Resources Act which, while it introduced stricter controls on the exploitation of water resources, also protected existing, sometimes over-generous, licences by making them 'Licences of Right'. These old licences combined with newer ones have together allowed greater volumes of water to be taken than can be replaced from rainfall in dry years.

The Thames Water Authority - now Thames Water Utilities Ltd (TWUL) - recognised the problem in the mid 1980's and voluntarily agreed to abstract substantially less than the licensed amounts at six key riverside pumping stations. This spirit of cooperation continues and now NRA and TWUL, in consultation with the Darent River Preservation Society, have devised a scheme to restore flows and provide enhanced public recreation by ensuring sufficient water levels - even during prolonged dry spells - to sustain fish and river plant life in the River Darent. This will be achieved by augmentation of the river by the NRA during dry periods by pumping water into the river and also by reduction of TWUL's groundwater abstractions.

It is proposed to reduce TWUL's licences at five key pumping stations (Sundridge, Lullingstone, Eynsford, Horton Kirby and Darent). A sixth pumping station, Brasted, has already been shut down by TWUL and the abstraction licence has been revoked.

The six pumping stations had a combined licensed abstraction limit of 78,620 cubic metres/day. This advertisement serves notice of the proposal to reduce this to 51,959 cubic metres/day initially; 66% of the current total. After approximately two years, following joint reviews of the impact of these changes, it is possible that the licences will be reduced further.

To compensate for these reductions, it is proposed that River Thames water will be transferred to areas in S E London presently served from groundwater sources. But until the engineering works necessary to achieve this are complete, it is proposed that a temporary upward variation of TWUL's Bexley abstraction licence, from an average daily rate of 22,730 cubic metres/day to 31,781 cubic metres/day, which has been in force since 1/4/91, should be extended to 31/3/2001.

Under the provisions of a Water Resources Management Scheme agreed between NRA and TWUL, actual abstractions during winter at Sundridge, Lullingstone, Eynsford, Horton Kirby and Darent will be limited to 32,000 cubic metres/day during periods of normal water consumption. This will amount to only 41% of the present licensed total; a substantial reduction which will go a long way towards maximising winter recharge of the groundwater reservoirs, allowing them to withstand the impact of high summer demand and also sustain adequate flows in the river.



# NOTICE OF PROPOSALS FOR VARYING LICENCES TO ABSTRACT WATER

Notice is hereby given that the National Rivers Authority in pursuance of Section 52 of the Water Resources Act 1991 have formulated proposals for the varying of licence serial numbers 9/40/1/121/GR, 9/40/1/122/GR, 9/40/1/123/GR, 9/40/1/125/GR, 9/40/1/130/GR and 9/40/1/133/GR held by Thames Water Utilities Limited and allowing abstraction from Chalk and Lower Greensand underground strata in the parishes of Horton Kirby, Eynsford, Sundridge, Brasted, Bexley and Sutton-at-Hone in the county of Kent. The variations proposed are as follows:-

- |    |                                                            |                                                                                                                                                                                    |
|----|------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1) | 9/40/1/123/GR (Sundridge)<br>Nat Grid Ref: TQ 4897 5568    | to reduce the annual quantity from 4,977,870 to 496,000 cubic metres and the daily quantity from 18,184 to 8,000 cubic metres                                                      |
| 2) | 9/40/1/122/GR (Lullingstone)<br>Nat Grid Ref: TQ 5248 6280 | to reduce the annual quantity from 3,318,580 to 1,642,500 cubic metres and the daily quantity from 9,092 to 6,140 cubic metres                                                     |
| 3) | 9/40/1/125/GR (Eynsford)<br>Nat Grid Ref: TQ 5358 6550     | to reduce the annual quantity from 6,139,373 to 4,234,000 cubic metres                                                                                                             |
| 4) | 9/40/1/121/GR (Horton Kirby)<br>Nat Grid Ref: TQ 5584 6800 | to reduce the annual quantity from 4,977,870 to 4,964,000 cubic metres                                                                                                             |
| 5) | 9/40/1/133/GR (Darenth)<br>Nat Grid Ref: TQ 5542 7189      | to reduce the annual quantity from 7,632,734 to 7,628,500 cubic metres                                                                                                             |
| 6) | 9/40/1/130/GR (Bexley)<br>Nat Grid Ref: TQ 4820 7280       | to extend to 31/3/2001 the existing temporary increase in the annual quantity from 8,296,614 to 11,600,000 cubic metres and the daily quantity from 31,822 to 40,000 cubic metres. |

The proposals are part of the Darent Action Plan to restore flows to the River Darent during dry spells. They are in accordance with Schedules 1, 3 and 4 of the Memorandum of Understanding between Thames Water Utilities Ltd. and the National Rivers Authority signed on the 1<sup>st</sup> August 1995.

A copy of an NRA statement giving further details of the proposals may be inspected free of charge at all reasonable hours between /11/95 and /12/95 at:

Westerham Library  
Sevenoaks Library & (Buckhurst Lane)  
Otford Library  
Eynsford Post Office  
Horton Kirby & South Darenth Parish Council Office  
Dartford Central Library  
Bexley Central Library  
Sidcup Central Library

Any person who wishes to make representations about the proposals should do so in writing to the Kent Area Manager, National Rivers Authority, Millbrook House, Mill Street, East Malling, Kent ME19 6BU before the end of the said period.

Signed.....

Date.....

Kent Area Manager  
National Rivers Authority-Southern Region

**APPENDIX C**

**LICENCES**





**KENT RIVER AUTHORITY****Water Resources Act 1963****Water Resources (Licences) Regulations 1965****SUNDRIDGE PUMPS STATION****LICENCE OF RIGHT TO ABSTRACT WATER**

EDUCATION UNIT OF SURREY COUNTY COUNCIL

whereas the Kent River Authority (hereinafter referred to as "the Authority")  
 hereby grant a licence to **THAMES WATER BOARD (MET WATER CO)**  
 to abstract water from the source described in the Schedule hereto, subject to the provisions specified in such Schedule.

**New River Head,****Rosebery Avenue,****LONDON, E.C.1.**

(hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

This licence shall [remain in force until revoked] ~~expire on the~~ **days**

~~of~~ **18xxxxxx**

Dated this **30th** day of **November** 19 **66.**

**A. G. STIRK**

Clerk of the Authority.

**Rivers House,  
 London Road,  
 MAIDSTONE.**

**NOTES.****1. Fees and Charges.**

The fee payable by the licence holder under Section 57 of the Act on the grant of this licence and annually thereafter is £ **5.000** (or such other sum as is for the time being prescribed by order of the Minister of Housing and Local Government). In addition, charges may be payable pursuant to Part V of the Act in respect of water authorised to be abstracted under this licence.

**2. Reasons for Conditions.**

Reasons for the imposition of conditions and for any material departure from the proposals in the application for the licence are set forth on the **third and fourth** page(s) hereof.

**3. Right of Appeal.**

If the licence holder is dissatisfied with the decision of the River Authority on his application he may appeal to the Minister of Housing and Local Government in accordance with Section 39 of the Water Resources Act 1963 and the Water Resources (Licences) Regulations 1965 (S.I. 1965 No. 534), by notice in writing to the Minister **WITHIN ONE MONTH** from the date of receipt of this licence and he must serve a copy of the notice on the River Authority within that time. The Minister has power to allow a longer period for the giving of a notice of appeal.

#### 4. Offences.

Attention is drawn to the following offences under the Act. It is an offence:—

- (1) to fail to comply with a condition or requirement of a licence—penalty, a fine (not exceeding £100 in the case of summary conviction) [Section 49];
- (2) to construct or extend any well, borehole or other work whereby water may be abstracted from underground strata, or instal or modify any machinery or apparatus whereby additional quantities of water may be abstracted from underground strata, unless the abstraction of the water, or additional quantities of water, is authorised by licence under the Act and the well, borehole or other work as constructed or extended, or the machinery or apparatus as installed or modified, complies with the requirements of the licence—penalty as in (1) above [Sections 23 (2) and 49];
- (3) wilfully to alter or to interfere with a measuring device required by a licence to be used, so as to prevent it from measuring correctly—penalty, imprisonment, or a fine, or both [Section 115].

#### 5. IMPORTANT NOTICE TO A SUCCESSOR TO THIS LICENCE.

If you have become the holder of this licence, in accordance with Section 32 (1), or regulations made under Section 32 (3), of the Water Resources Act 1963, by succeeding to the previous licence holder's occupation of land specified in the licence as land on which water abstracted in pursuance of the licence is to be used, you should note that, by virtue of Section 32 (2) of the above Act (or corresponding provisions in the regulations under Section 32 (3)), you will cease to be the holder of the licence at the end of a period of one month from the date on which you became the occupier of the land in question unless before the end of that period you have given the River Authority notice of the change in the occupation of the land.

### SCHEDULE.

#### PROVISIONS OF LICENCE.

##### Source of supply and point of abstraction

1. The source of supply from which water may be abstracted in pursuance of this licence is the Lower Greensand - Hythe Beds underground strata, in the parish of Sundridge in the County of Kent, and abstraction may be made at any point within the area edged red on the plan reference number 1/123/CR/1 attached to this licence.

##### Authorised purposes

2. The water is to be used for the purposes of a statutory water undertaking only.

##### Authorised quantities

3. The quantities of water which may be abstracted in pursuance of this licence are limited as follows:—

- (1) 1,095,000,000 gallons in any period of 12 months ending at 9 a.m. on the 1st October; and
- (2) 4,000,000 gallons in any period of 24 hours from 9 a.m.

##### Means of abstraction

4. The means whereby the water may be abstracted shall be:—

- (1) all such bores, wells and adits as may be constructed within the area shown edged red on the said plan, continuously lined from ground level through the Drift and Folkestone and Sandgate Beds underground strata;
- (2) pumping machinery, the total capacity of which shall not exceed 4,000,000 gallons per day.

#### Measurement or assessment

5. (1) The following provisions shall apply for measurement or assessment of all quantities of water abstracted in pursuance of this licence:-

- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, instal a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
- (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
- (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
- (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
- (e) The licence holder shall maintain the meter(s) at all times in proper working order and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the meter(s) are in proper working order.

(2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.

(3) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes/wells both (a) at the end of a period during which there has been no pumping and immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

#### Notification of additional works

6. The licence holder shall from time to time inform the Authority of any alterations or additions made to the works and equipment at the source of supply from those which were specified in the application for this licence.

#### Protected Source

7. (1) In this condition "the protected source" means any well, borehole or spring which is situated within one mile of the licence holder's Sundridge Station and was on the twelfth day of December, 1985, in use as an effective source of supply; and "owner" includes an occupier or a lessee;



(2) If at any time it shall be proved by the owner of a protected source that abstraction of water by the licence holder, from their Sundridge Well Station, in pursuance of this licence has caused a diminution of the supply of water in the protected source the licence holder shall at their option either -

(a) afford to the owner a supply of water equal to the amount of the diminution; or

(b) at the expense of the licence holder make such alterations in the pumping equipment installed at the protected source, whether by way of enlarging or altering the position of the equipment or of installing fresh equipment, as will make good the diminution; or

(c) at the expense of the licence holder deepen or extend the protected source to such extent, or make such borings therein or headings therefrom, as will make good the diminution.

Provided however that nothing in this paragraph shall relieve any person from the obligation to obtain any necessary licence under the Water Resources Act 1963.

(5) The licence holder shall not be under any liability under the foregoing paragraph if the owner shall have failed to afford to the licence holder and their officers and servants without charge and at all reasonable times after the coming into effect of this licence access to the protected source and facilities for ascertaining the level and quantity of the water therein; and such information as the licence holder may reasonably require as to the cost to the owner of operating the protected source.

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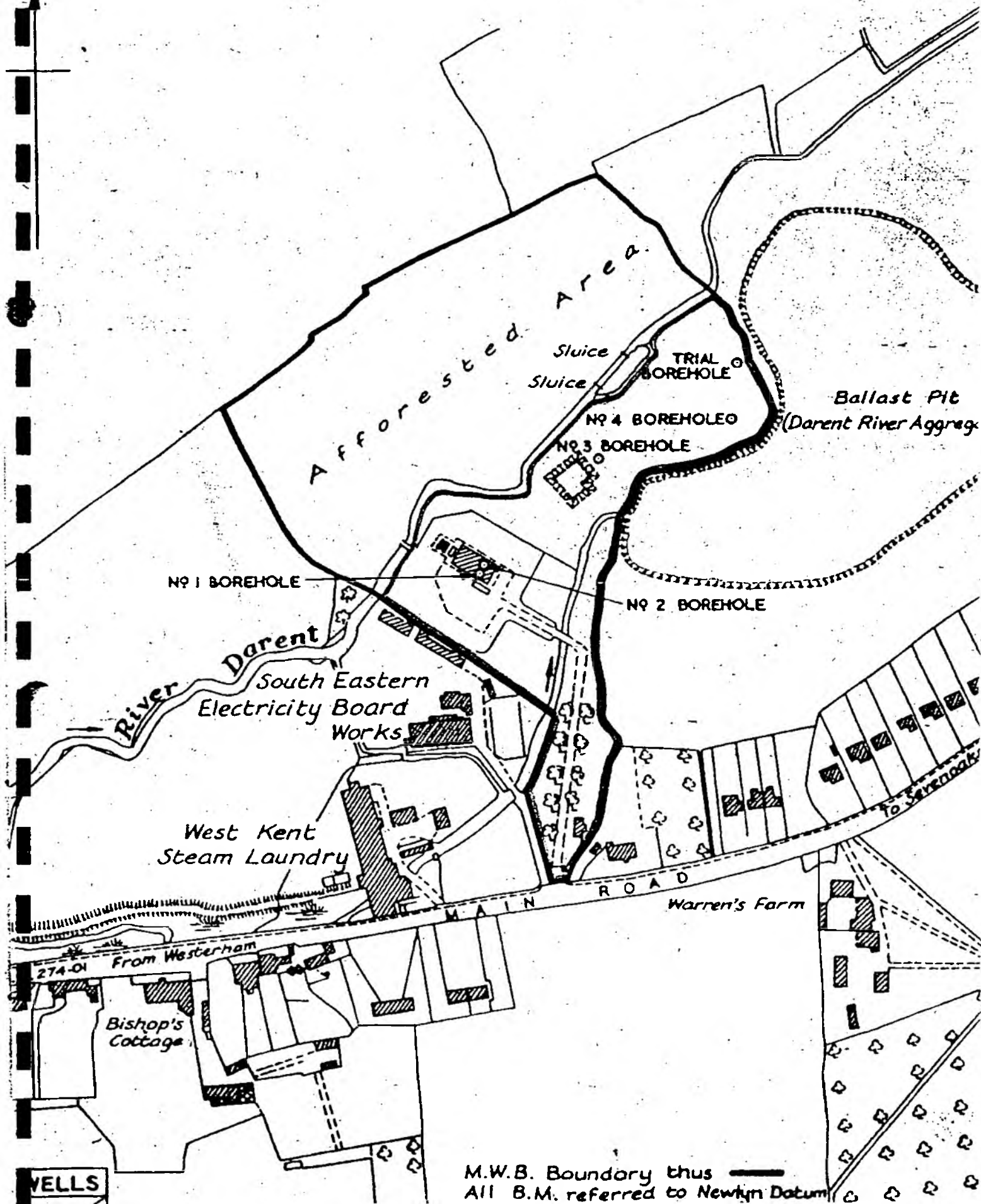
#### REASONS FOR CONDITIONS OF THIS LICENCE

1( To secure the proper use of the water resources of the area.

2( Condition No. 7 of the schedule to this licence is in accordance with a similar condition contained in a licence under Section 14 of the Water Act 1945, dated 12th December, 1955, granted in respect of this source of supply.

# SUNDRIDGE

1/123/GC/1





57

CHARTING IN

56

49



**KENT RIVER AUTHORITY**

Water Resources Act 1963

Water Resources (Licences) Regulations 1965

DARENTH PUMPING STATION**LICENCE OF RIGHT TO ABSTRACT WATER**

THE KENT RIVER AUTHORITY (hereinafter referred to as "the Authority") hereby grant a licence to:

~~Metropolitan Water Board,~~

THAMES WATER AUTH (NEW WATER)

New River Head,

Rosebery Avenue,

LONDON, E.C.1.

(hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

This licence shall [remain in force until revoked] [expire on the ~~19th~~ day of ~~xxxxxx~~ 19~~xxxxxx~~].

Dated this 30th day of December 19 66

**A. G. STIRK**

Clerk of the Authority.

Rivers House,  
London Road,  
MAIDSTONE.

**NOTES.****1. Fees and Charges.**

The fee payable by the licence holder under Section 57 of the Act on the grant of this licence and annually thereafter is £ 5... (or such other sum as is for the time being prescribed by order of the Minister of Housing and Local Government). In addition, charges may be payable pursuant to Part V of the Act in respect of water authorised to be abstracted under this licence.

**2. Reasons for Conditions.**

Reasons for the imposition of conditions and for any material departure from the proposals in the application for the licence are set forth on the **third** page(s) hereof.

**3. Right of Appeal.**

If the licence holder is dissatisfied with the decision of the River Authority on his application he may appeal to the Minister of Housing and Local Government in accordance with Section 39 of the Water Resources Act 1963 and the Water Resources (Licences) Regulations 1965 (S.I. 1965 No. 534), by notice in writing to the Minister WITHIN ONE MONTH from the date of receipt of this licence and he must serve a copy of the notice on the River Authority within that time. The Minister has power to allow a longer period for the giving of a notice of appeal.

#### 4. Offences.

Attention is drawn to the following offences under the Act. It is an offence:—

- (1) to fail to comply with a condition or requirement of a licence—penalty, a fine (not exceeding £100 in the case of summary conviction) [Section 49];
- (2) to construct or extend any well, borehole or other work whereby water may be abstracted from underground strata, or instal or modify any machinery or apparatus whereby additional quantities of water may be abstracted from underground strata, unless the abstraction of the water, or additional quantities of water, is authorised by licence under the Act and the well, borehole or other work as constructed or extended, or the machinery or apparatus as installed or modified, complies with the requirements of the licence—penalty as in (1) above [Sections 23 (2) and 49];
- (3) wilfully to alter or to interfere with a measuring device required by a licence to be used, so as to prevent it from measuring correctly—penalty, imprisonment, or a fine, or both [Section 115].

#### 5. IMPORTANT NOTICE TO A SUCCESSOR TO THIS LICENCE.

If you have become the holder of this licence, in accordance with Section 32 (1), or regulations made under Section 32 (3), of the Water Resources Act 1963, by succeeding to the previous licence holder's occupation of land specified in the licence as land on which water abstracted in pursuance of the licence is to be used, you should note that, by virtue of Section 32 (2) of the above Act (or corresponding provisions in the regulations under Section 32 (3)), you will cease to be the holder of the licence at the end of a period of one month from the date on which you became the occupier of the land in question unless before the end of that period you have given the River Authority notice of the change in the occupation of the land.

### SCHEDULE.

#### PROVISIONS OF LICENCE.

##### Source of supply and point of abstraction

1. The source of supply from which water may be abstracted in pursuance of this licence is the chalk underground strata, in the parish of Sutton-at-Rene, the County of Kent, and abstraction may be made at any point within the area edged red on the plan reference number 1/135/GR/1 attached to this licence.

##### Authorised purposes

2. The water is to be used for the purposes of a statutory water undertaking only.

##### Authorised quantities

3. The quantities of water which may be abstracted in pursuance of this licence are limited as follows:—

- (1) 1,679,000,000 gallons in any period of 12 months ending at 9 a.m. on the 1st October; and
- (2) 5,000,000 gallons in any period of 24 hours from 9 a.m.

##### Means of abstraction

4. The means whereby the water may be abstracted shall be:—

- (1) All such wells and adits as may be constructed within the area shown edged red on the said plan.
- (2) pumping machinery, the total capacity of which shall not exceed 5,000,000 gallons per day.

#### Measurement or assessment

5. (1) The following provisions shall apply for measurement or assessment of all quantities of water abstracted in pursuance of this licence:-

- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, install a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
- (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
- (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
- (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
- (e) The licence holder shall maintain the meter(s) at all times in proper working order and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the meter(s) are in proper working order.

(2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.

(3) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes/wells both immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

#### Notification of additional works

6. The licence holder shall from time to time inform the Authority of any alterations or additions made to the works and equipment at the source of supply from those which were specified in the application for this licence.

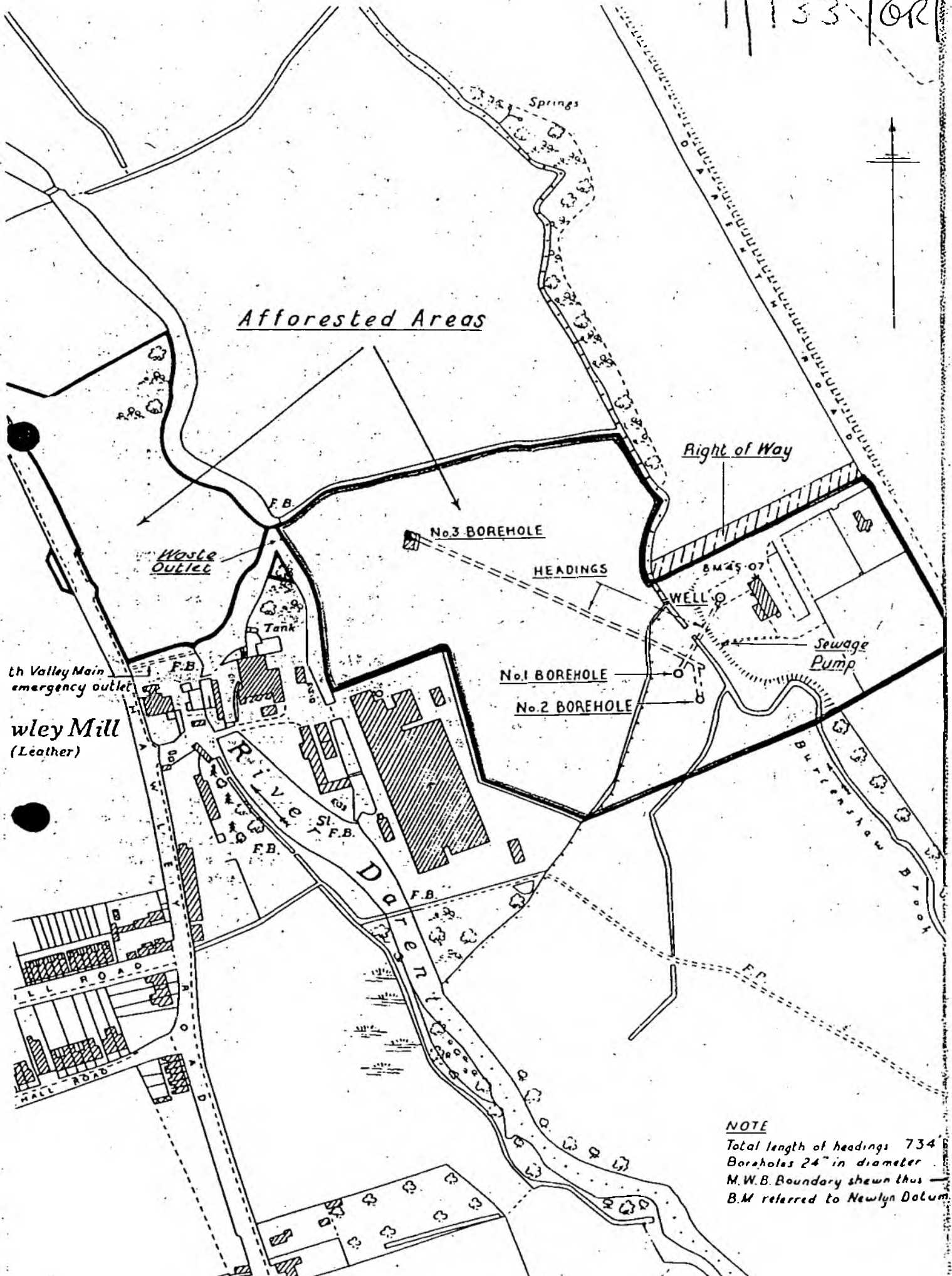
#### REASON FOR CONDITIONS OF THIS LICENCE

To secure the proper use of the water resources of the area.



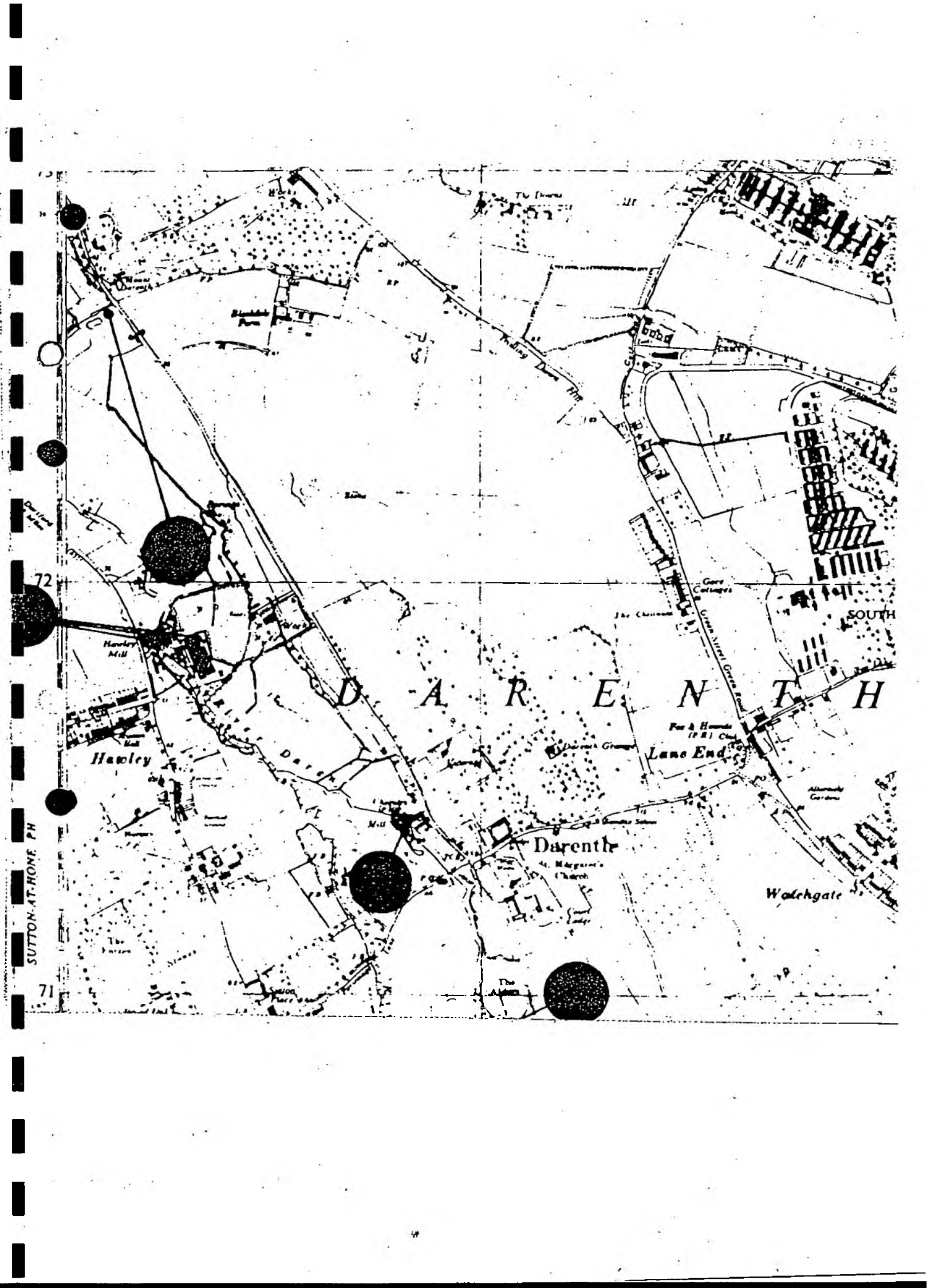
# DARENTH WELL HEADINGS

1133/0R



## NOTE

Total length of headings 734  
 Boreholes 24" in diameter  
 M.W.B. Boundary shown thus —  
 B.M. referred to Newlyn Datum



## Water Resources Act 1963

# Water Resources (Licences) Regulations 1965

**HORTON RICKY PLUM INC SEATTLE**

**New River Road.**

**Rosebery Avenue,**

LOSING 2.0.1

(hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

This licence shall [remain in force until revoked] [expire on the 19 day 19].

Dated this

30th

day of

September

19 66

AG. STIRK

Clerk of the Authority.

Rivers House,  
London Road,  
MAIDSTONE.

NOTES.

### 1. Fees and Charges.

The fee payable by the licence holder under Section 57 of the Act on the grant of this licence and annually thereafter is £ 5,000 (or such other sum as is for the time being prescribed by order of the Minister of Housing and Local Government). In addition, charges may be payable pursuant to Part V of the Act in respect of water authorised to be abstracted under this licence.

## 2. Reasons for Conditions.

Reasons for the imposition of conditions and for any material departure from the proposals in the application for the licence are set forth on the 11 page(s) thereof.

### 3. Right of Appeal.

If the licence holder is dissatisfied with the decision of the River Authority on his application he may appeal to the Minister of Housing and Local Government in accordance with Section 39 of the Water Resources Act 1963 and the Water Resources (Licences) Regulations 1965 (S.I. 1965 No. 534), by notice in writing to the Minister WITHIN ONE MONTH from the date of receipt of this licence and he must serve a copy of the notice on the River Authority within that time. The Minister has power to allow a longer period for the giving of a notice of appeal.

#### 4. Offences.

Attention is drawn to the following offences under the Act. It is an offence:—

- (1) to fail to comply with a condition or requirement of a licence—penalty, a fine (not exceeding £100 in the case of summary conviction) [Section 49];
- (2) to construct or extend any well, borehole or other work whereby water may be abstracted from underground strata, or instal or modify any machinery or apparatus whereby additional quantities of water may be abstracted from underground strata, unless the abstraction of the water, or additional quantities of water, is authorised by licence under the Act and the well, borehole or other work as constructed or extended, or the machinery or apparatus as installed or modified, complies with the requirements of the licence—penalty as in (1) above [Sections 23 (2) and 49];
- (3) wilfully to alter or to interfere with a measuring device required by a licence to be used, so as to prevent it from measuring correctly—penalty, imprisonment, or a fine, or both [Section 115].

#### 5. IMPORTANT NOTICE TO A SUCCESSOR TO THIS LICENCE.

If you have become the holder of this licence, in accordance with Section 32 (1), or regulations made under Section 32 (3), of the Water Resources Act 1963, by succeeding to the previous licence holder's occupation of land specified in the licence as land on which water abstracted in pursuance of the licence is to be used, you should note that, by virtue of Section 32 (2) of the above Act (or corresponding provisions in the regulations under Section 32 (3)), you will cease to be the holder of the licence at the end of a period of one month from the date on which you became the occupier of the land in question unless before the end of that period you have given the River Authority notice of the change in the occupation of the land.

### SCHEDULE.

#### PROVISIONS OF LICENCE.

Source of supply and point of abstraction

1. The source of supply from which water may be abstracted in pursuance of this licence is the chalk underground strata, in the parish of Horton Kirby in the County of Kent, and abstraction may be made at any two points within the area edged red on the plan reference number 1/121/08/1 attached to this licence.

#### Authorised purposes

2. The water is to be used for the purposes of a statutory water undertaking only.

#### Authorised quantities

3. The quantities of water which may be abstracted in pursuance of this licence are limited as follows:—

- (1) 1,095,000,000 gallons in any period of 12 months ending at 9 a.m. on the 1st October; and
- (2) 4,000,000 gallons in any period of 24 hours from 9 a.m.

#### Means of abstraction

4. The means whereby the water may be abstracted shall be:—

- (1) two boreholes within the area shown edged red on the said plan.
- (2) pumping machinery, the total capacity of which shall not exceed 4,000,000 gallons per day.



### Measurement or assessment

5. (1) The following provisions shall apply for measurement or assessment of all quantities of water abstracted in pursuance of this licence:-

- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, instal a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
  - (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
  - (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
  - (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
  - (e) The licence holder shall maintain the meter(s) at all times in proper working order and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the meter(s) are in proper working order.
- (2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.
- (3) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes both (a) at the end of a period during which there has been no pumping and immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

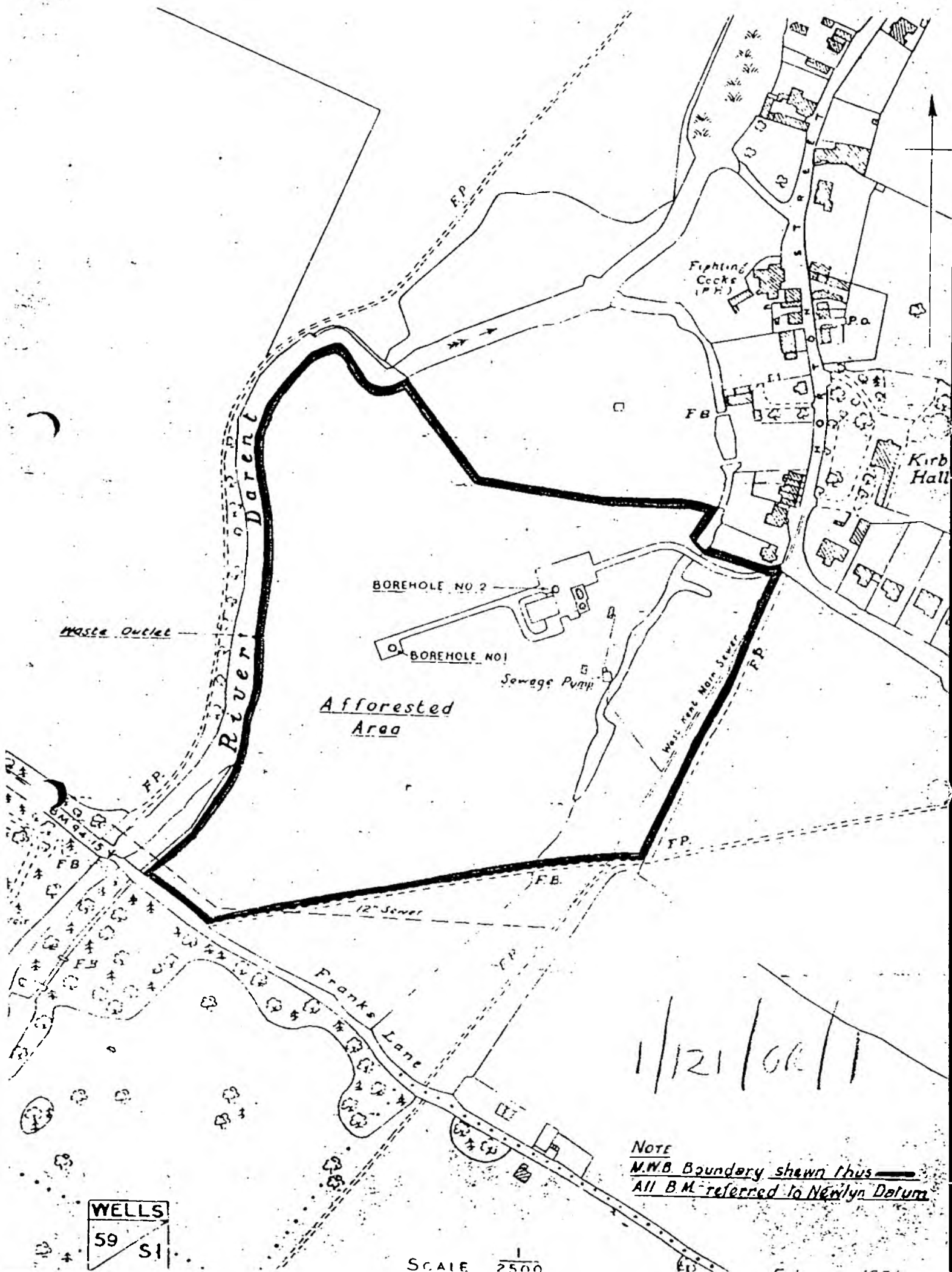
### Notification of works

6. The licence holder shall from time to time inform the Authority of any alterations made to the works and equipment at the source of supply from those which were specified in the application for this licence.

### REASON FOR CONDITIONS OF THIS LICENCE

To secure the proper use of the water resources of the area.

# HORTON KIRBY



1/12/66

NOTE  
M.W.B. Boundary shown thus ———  
All B.M. referred to Newlyn Datum

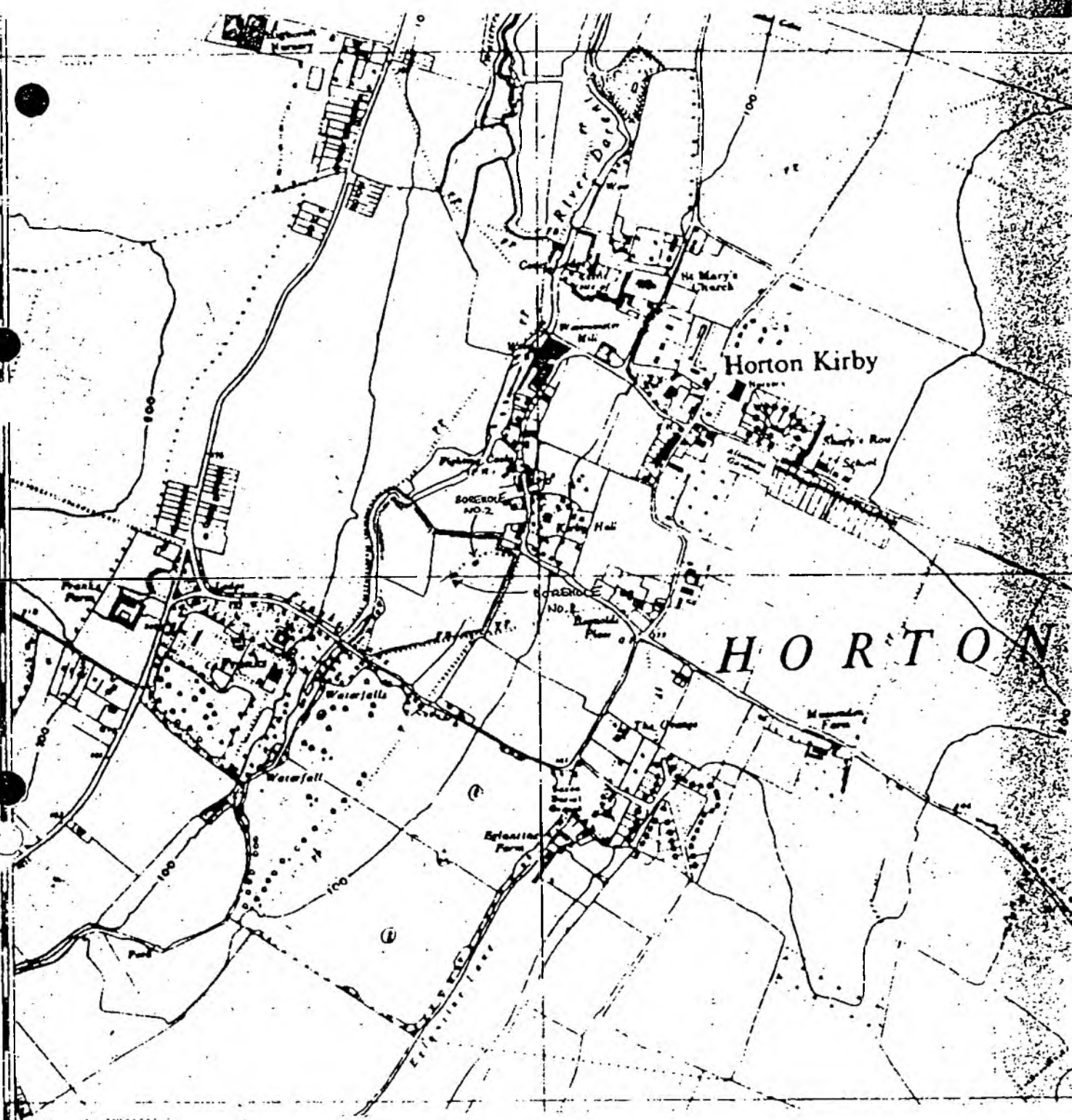
WELLS  
59 S1

SCALE 1/2500

69

8

67







**KENT RIVER AUTHORITY**

Water Resources Act 1963

Water Resources (Licences) Regulations 1965

**LICENCE OF RIGHT TO ABSTRACT WATER**

THE KENT RIVER AUTHORITY (hereinafter referred to as "the Authority") hereby grant a licence to: **THAMES WATER AUTHORITY** (hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

New River Head,

Rosebery Avenue,

LONDON, E.C.1.

(hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

This licence shall [remain in force until revoked] [expire on the **1st** day of **January** 19 **67**].

Dated this

30th

day of

December

19 66

A. G. STIRK

Clerk of the Authority.

Rivers House,  
London Road,  
MAIDSTONE.

**NOTES.****1. Fees and Charges.**

The fee payable by the licence holder under Section 57 of the Act on the grant of this licence and annually thereafter is £ **5.00** (or such other sum as is for the time being prescribed by order of the Minister of Housing and Local Government). In addition, charges may be payable pursuant to Part V of the Act in respect of water authorised to be abstracted under this licence.

**2. Reasons for Conditions.**

Reasons for the imposition of conditions and for any material departure from the proposals in the application for the licence are set forth on the **third** page(s) hereof.

**3. Right of Appeal.**

If the licence holder is dissatisfied with the decision of the River Authority on his application he may appeal to the Minister of Housing and Local Government in accordance with Section 39 of the Water Resources Act 1963 and the Water Resources (Licences) Regulations 1965 (S.I. 1965 No. 534), by notice in writing to the Minister **WITHIN ONE MONTH** from the date of receipt of this licence and he must serve a copy of the notice on the River Authority within that time. The Minister has power to allow a longer period for the giving of a notice of appeal.

#### 4. Offences.

Attention is drawn to the following offences under the Act. It is an offence:—

- (1) to fail to comply with a condition or requirement of a licence—penalty, a fine (not exceeding £100 in the case of summary conviction) [Section 49];
- (2) to construct or extend any well, borehole or other work whereby water may be abstracted from under ground strata, or instal or modify any machinery or apparatus whereby additional quantities of water may be abstracted from underground strata, unless the abstraction of the water, or additional quantity of water, is authorised by licence under the Act and the well, borehole or other work as constructed or extended, or the machinery or apparatus as installed or modified, complies with the requirement of the licence—penalty as in (1) above [Sections 23 (2) and 49];
- (3) wilfully to alter or to interfere with a measuring device required by a licence to be used, so as to prevent it from measuring correctly—penalty, imprisonment, or a fine, or both [Section 115]

#### 5. IMPORTANT NOTICE TO A SUCCESSOR TO THIS LICENCE.

If you have become the holder of this licence, in accordance with Section 32 (1), or regulations made under Section 32 (3), of the Water Resources Act 1963, by succeeding to the previous licence holder's occupation of land specified in the licence as land on which water abstracted in pursuance of the licence is to be used, you should not, that, by virtue of Section 32 (2) of the above Act (or corresponding provisions in the regulations under Section 32 (3)), you will cease to be the holder of the licence at the end of a period of one month from the date on which you became the occupier of the land in question unless before the end of that period you have given the River Authority notice of the change in the occupation of the land.

### SCHEDULE.

#### PROVISIONS OF LICENCE.

##### Source of supply and point of abstraction

1. The source of supply from which water may be abstracted in pursuance of this licence is the chalk underground strata, in the parish of Eynsford in the County of Kent, and abstraction may be made at any two points within the area edged red on the plan reference number 1/122/GR/1 attached to this licence.

##### Authorised purposes

2. The water is to be used for the purposes of a statutory water undertaking only.

##### Authorised quantities

3. The quantities of water which may be abstracted in pursuance of this licence are limited as follows:—

- (1) 730,000,000 gallons in any period of 12 months ending at 9 a.m. on the 1st October; and
- (2) 2,000,000 gallons in any period of 24 hours from 9 a.m.

##### Means of abstraction

4. The means whereby the water may be abstracted shall be:—

- (1) two boreholes within the area shown edged red on the said plan.
- (2) pumping machinery, the total capacity of which shall not exceed 2,000,000 gallons per day.

##### Measurement or assessment

5. (1) The following provisions shall apply for measurement or assessment of all quantities of water abstracted in pursuance of this licence:—

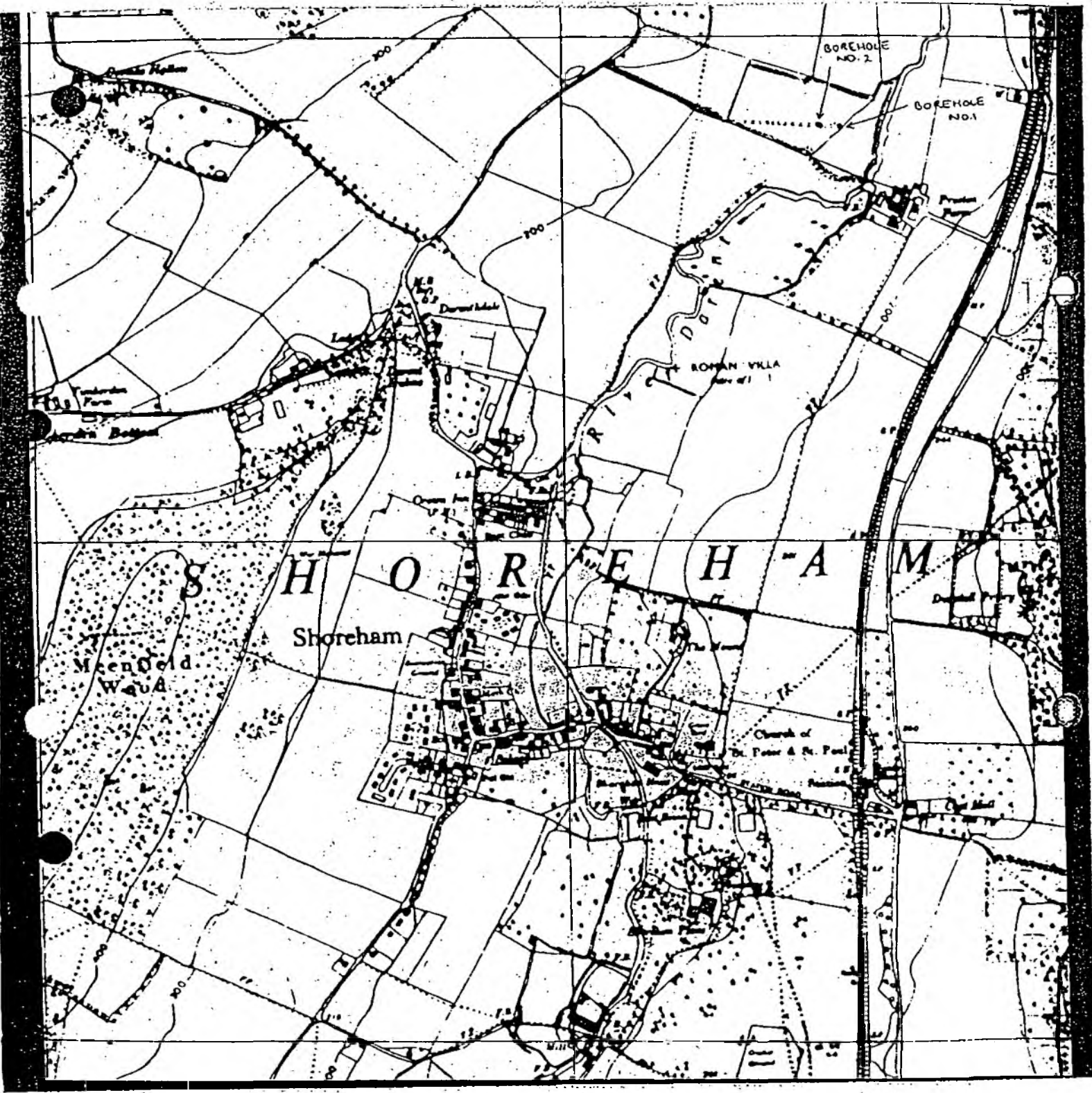
- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, instal a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
  - (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
  - (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
  - (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
  - (e) The licence holder shall maintain the meter(s) at all times in proper working order and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the meter(s) are in proper working order.
- (2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.
- (5) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes both (a) at the end of a period during which there has been no pumping and immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

#### Notification of works

6. The licence holder shall from time to time inform the Authority of any alterations made to the works and equipment at the source of supply from those which were specified in the application for this licence.

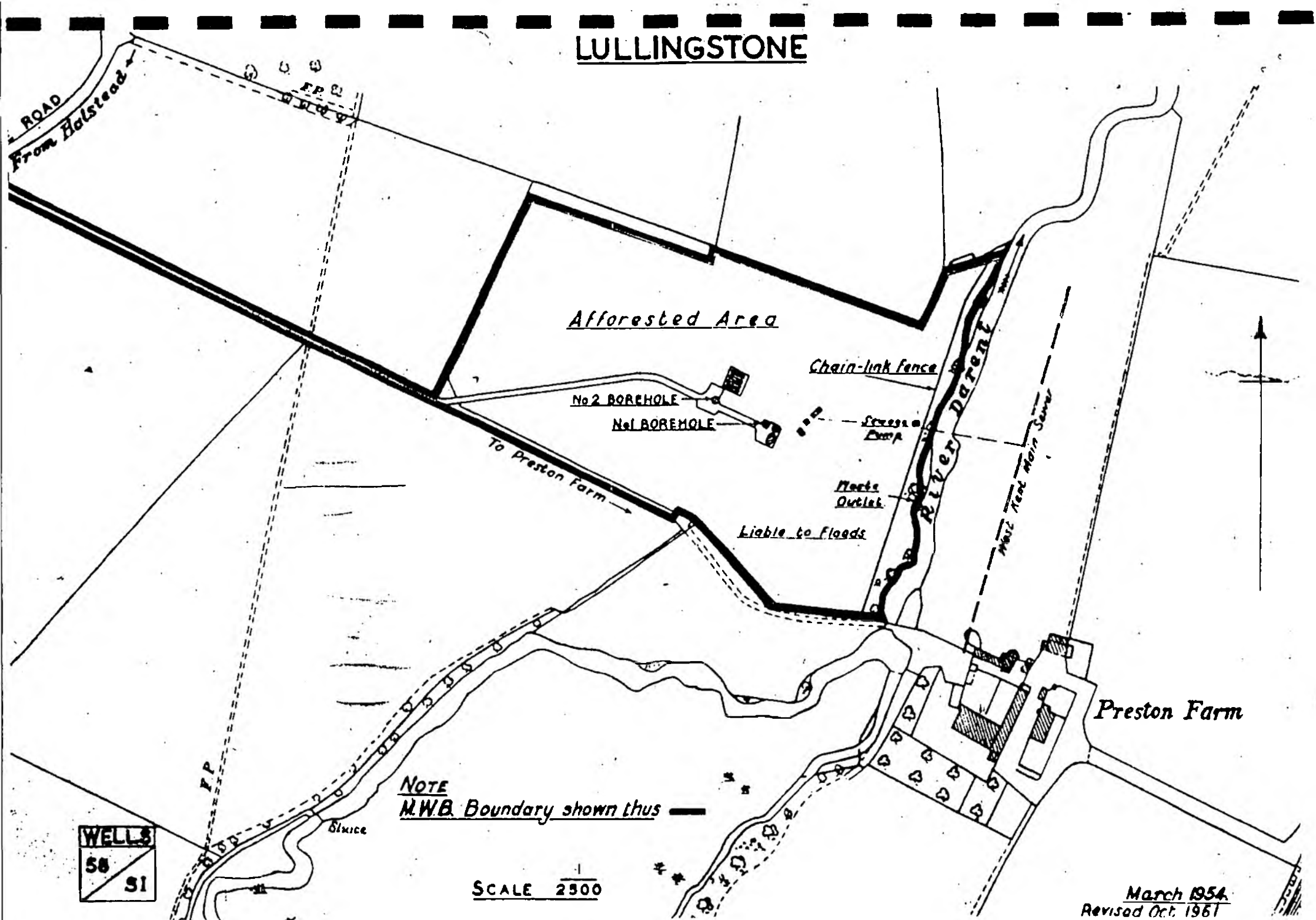
#### REASON FOR CONDITIONS OF THIS LICENCE

To secure the proper use of the water resources of the area.





# LULLINGSTONE





- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, instal a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
  - (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
  - (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
  - (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
  - (e) The licence holder shall maintain the meter(s) at all times in proper working order and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the Meter(s) are in proper working order.
- (2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.
- (3) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes both (a) at the end of a period during which there has been no pumping and immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

#### Notification of works

6. The licence holder shall from time to time inform the Authority of any alterations made to the works and equipment at the source of supply from those which were specified in the application for this licence.

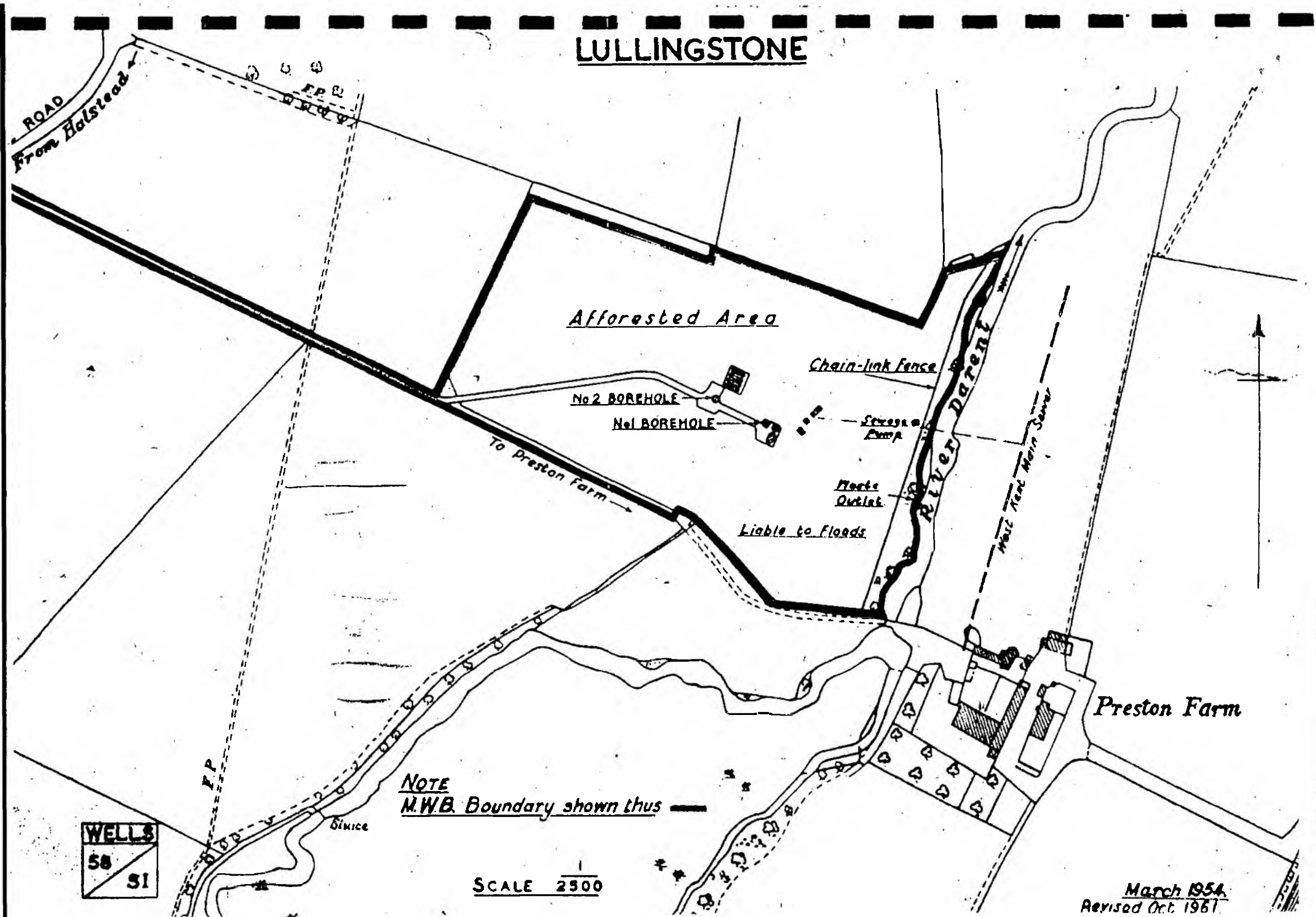
#### REASON FOR CONDITIONS OF THIS LICENCE

To secure the proper use of the water resources of the area.





# LULLINGSTONE





**KENT RIVER AUTHORITY**

Water Resources Act 1963

Water Resources (Licences) Regulations 1965

~~ETHEPORN FOR THE KENT RIVER AUTHORITY~~**LICENCE OF RIGHT TO ABSTRACT WATER**

THE KENT RIVER AUTHORITY (hereinafter referred to as "the Authority") hereby grant a licence to

New River Road,

Rosebery Avenue,

LONDON, E.C.1.

13 JAN 1967	

(hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

This licence shall [remain in force until revoked] [~~expire on the~~ **day**

88

~~1966~~

Dated this **30th** day of **December** 19**66**.

**A. G. STIRK**

Clerk of the Authority.

Rivers House,  
London Road,  
MAIDSTONE.

**NOTES.****1. Fees and Charges.**

The fee payable by the licence holder under Section 57 of the Act on the grant of this licence and annually thereafter is £**3.00** (or such other sum as is for the time being prescribed by order of the Minister of Housing and Local Government). In addition, charges may be payable pursuant to Part V of the Act in respect of water authorised to be abstracted under this licence.

**2. Reasons for Conditions.**

Reasons for the imposition of conditions and for any material departure from the proposals in the application for the licence are set forth on the **third** page(s) hereof.

**3. Right of Appeal.**

If the licence holder is dissatisfied with the decision of the River Authority on his application he may appeal to the Minister of Housing and Local Government in accordance with Section 39 of the Water Resources Act 1963 and the Water Resources (Licences) Regulations 1965 (S.I. 1965 No. 534), by notice in writing to the Minister **WITHIN ONE MONTH** from the date of receipt of this licence and he must serve a copy of the notice on the River Authority within that time. The Minister has power to allow a longer period for the giving of a notice of appeal.

#### 4. Offences.

Attention is drawn to the following offences under the Act. It is an offence:—

- (1) to fail to comply with a condition or requirement of a licence—penalty, a fine (not exceeding £100 in the case of summary conviction) [Section 49];
- (2) to construct or extend any well, borehole or other work whereby water may be abstracted from underground strata, or instal or modify any machinery or apparatus whereby additional quantities of water may be abstracted from underground strata, unless the abstraction of the water, or additional quantities of water, is authorised by licence under the Act and the well, borehole or other work as constructed or extended, or the machinery or apparatus as installed or modified, complies with the requirements of the licence—penalty as in (1) above [Sections 23 (2) and 49];
- (3) wilfully to alter or to interfere with a measuring device required by a licence to be used, so as to prevent it from measuring correctly—penalty, imprisonment, or a fine, or both [Section 115].

#### 5. IMPORTANT NOTICE TO A SUCCESSOR TO THIS LICENCE.

If you have become the holder of this licence, in accordance with Section 32 (1), or regulations made under Section 32 (3), of the Water Resources Act 1963, by succeeding to the previous licence holder's occupation of land specified in the licence as land on which water abstracted in pursuance of the licence is to be used, you should note that, by virtue of Section 32 (2) of the above Act (or corresponding provisions in the regulations under Section 32 (3)), you will cease to be the holder of the licence at the end of a period of one month from the date on which you became the occupier of the land in question unless before the end of that period you have given the River Authority notice of the change in the occupation of the land.

### SCHEDULE.

#### PROVISIONS OF LICENCE.

##### Source of supply and point of abstraction

1. The source of supply from which water may be abstracted in pursuance of this licence is the chalk underground strata, in the parish of Lynsford in the County of Kent, and abstraction may be made at any two points within the area edged red on the plan reference number 1/125/08/1 attached to this licence.

##### Authorised purposes

2. The water is to be used for the purposes of a statutory water undertaking only.

##### Authorised quantities

3. The quantities of water which may be abstracted in pursuance of this licence are limited as follows:—

- (1) 1,350,500,000 gallons in any period of 12 months ending at 9 A.M. on the 1st October; and
- (2) 4,000,000 gallons in any period of 24 hours from 9 A.M.

##### Means of abstraction

4. The means whereby the water may be abstracted shall be:—

- (1) two wells/boreholes within the area shown edged red on the said plan.
- (2) pumping machinery, the total capacity of which shall not exceed 4,250,000 gallons per day.



#### Measurement or Assessment

5. (1) The following provisions shall apply for measurement or assessment of all quantities of water abstracted in pursuance of this licence:-

- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, install a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
- (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
- (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
- (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
- (e) The licence holder shall maintain the meter(s) at all times in proper working order, and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the meter(s) are in proper working order.

(2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.

(3) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes/wells both (a) at the end of a period during which there has been no pumping and immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

#### Notification of works

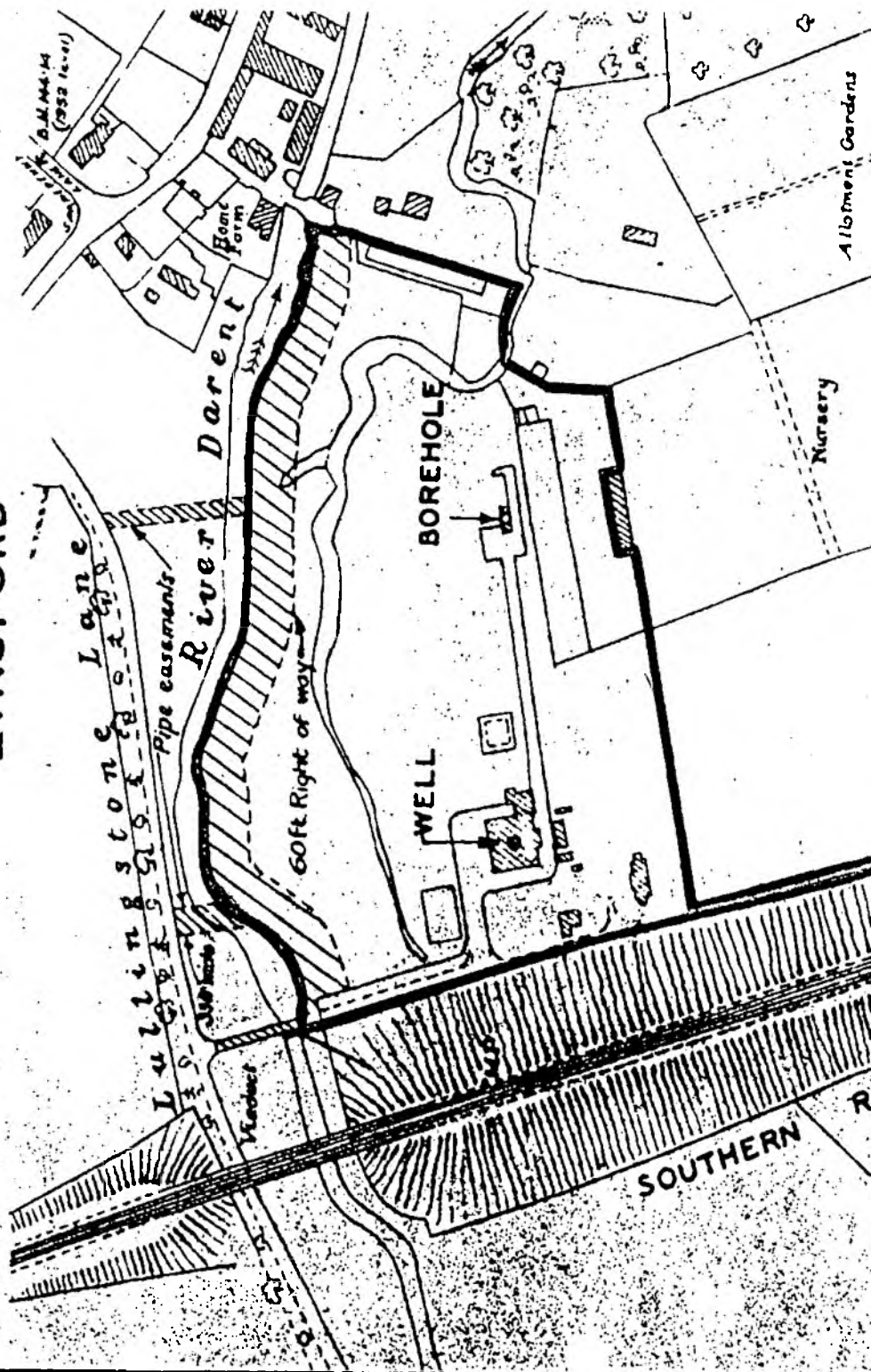
6. The licence holder shall from time to time inform the Authority of any alterations made to the works and equipment at the source of supply from those which were specified in the application for this licence.

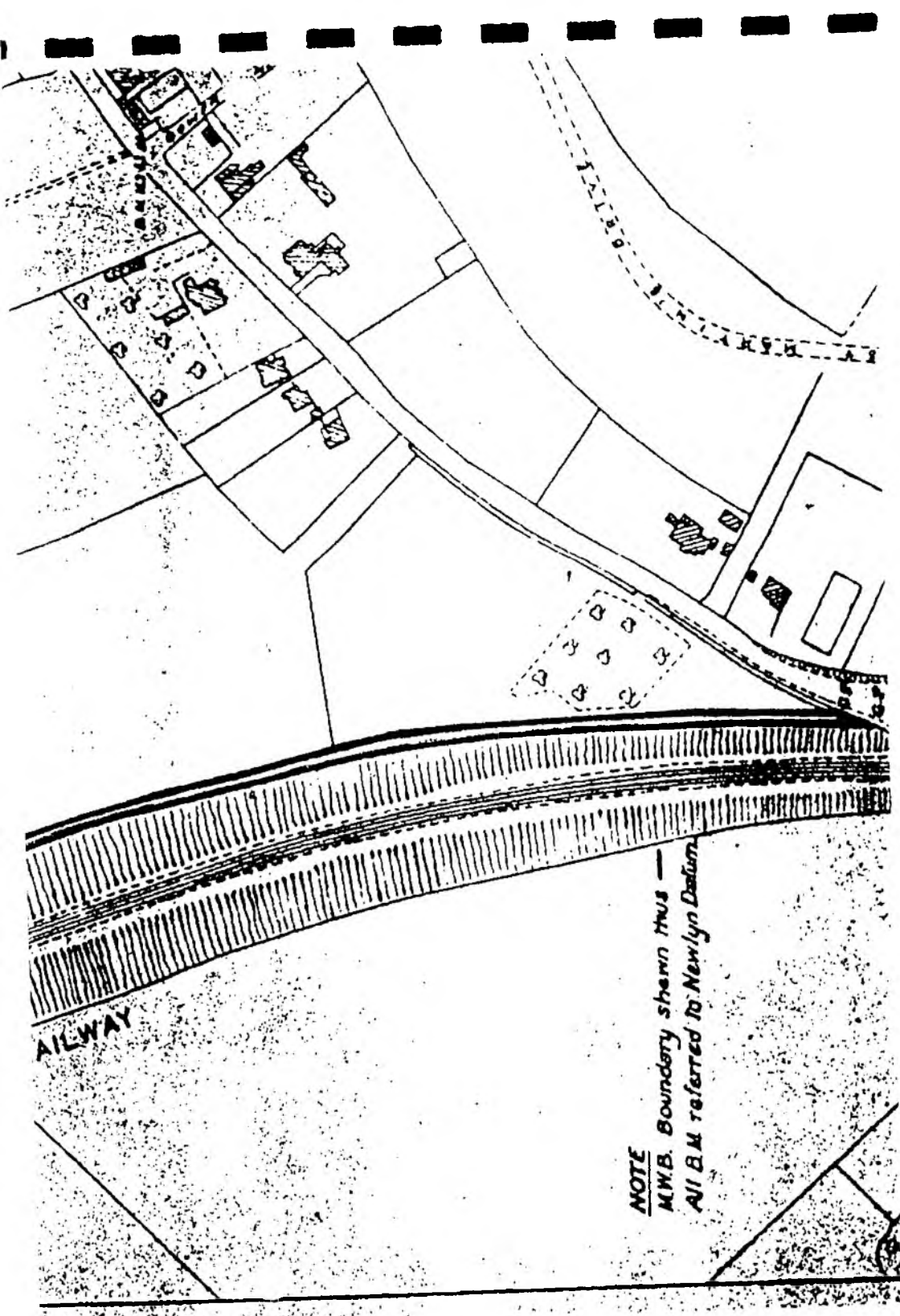
#### REASON FOR CONTINUANCE OF THIS LICENCE

To secure the proper use of the water resources of the area.

# METROPOLITAN WATER BOARD

## EYNSFORD





NOTE  
M.W.B. Boundary shown thus —  
All B.M. referred to Newlyn Datum.



67

66

LAT 54-17

10 Miles

65

Eynsford

ROMAN VILLA

ROMAN BUILDING

WELL

BOYD HILL

LONG 10 MILES





Vol. No. 7. 8.3.90

**KENT RIVER AUTHORITY****Water Resources Act 1963****Water Resources (Licences) Regulations 1965****ABSTRACT WATER LICENCE****LICENCE OF RIGHT TO ABSTRACT WATER**

**THE KENT RIVER AUTHORITY** (hereinafter referred to as "the Authority") hereby grant a licence to:—

~~THE METROPOLITAN WATER BOARD,~~  
~~100, WHITE CHURCH ROAD, LONDON, W.1.~~  
~~Box River Road,~~

~~Rosebery Avenue,~~

~~LONDON, E.C.1.~~

(hereinafter referred to as "the licence holder") to abstract water from the source of supply described in the Schedule hereto, subject to the provisions specified in such Schedule.

This licence shall [remain in force until revoked] [expire on the 19 day of January 1967]

Dated this 30th day of October 1966.

**A. G. STIRK**

Clerk of the Authority.

Rivers House,  
 London Road,  
 MAIDSTONE.

**NOTES.****1. Fees and Charges.**

The fee payable by the licence holder under Section 57 of the Act on the grant of this licence and annually thereafter is £ 5.000 (or such other sum as is for the time being prescribed by order of the Minister of Housing and Local Government). In addition, charges may be payable pursuant to Part V of the Act in respect of water authorised to be abstracted under this licence.

**2. Reasons for Conditions.**

Reasons for the imposition of conditions and for any material departure from the proposals in the application for the licence are set forth on the third page(s) hereof.

**3. Right of Appeal.**

If the licence holder is dissatisfied with the decision of the River Authority on his application he may appeal to the Minister of Housing and Local Government in accordance with Section 39 of the Water Resources Act 1963 and the Water Resources (Licences) Regulations 1965 (S.I. 1965 No. 534), by notice in writing to the Minister **WITHIN ONE MONTH** from the date of receipt of this licence and he must serve a copy of the notice on the River Authority within that time. The Minister has power to allow a longer period for the giving of a notice of appeal.

#### 4. Offences.

Attention is drawn to the following offences under the Act. It is an offence:—

- (1) to fail to comply with a condition or requirement of a licence—penalty, a fine (not exceeding £100 in the case of summary conviction) [Section 49];
- (2) to construct or extend any well, borehole or other work whereby water may be abstracted from underground strata, or instal or modify any machinery or apparatus whereby additional quantities of water may be abstracted from underground strata, unless the abstraction of the water, or additional quantities of water, is authorised by licence under the Act and the well, borehole or other work as constructed or extended, or the machinery or apparatus as installed or modified, complies with the requirements of the licence—penalty as in (1) above [Sections 23 (2) and 49];
- (3) wilfully to alter or to interfere with a measuring device required by a licence to be used, so as to prevent it from measuring correctly—penalty, imprisonment, or a fine, or both [Section 115].

#### 5. IMPORTANT NOTICE TO A SUCCESSOR TO THIS LICENCE.

If you have become the holder of this licence, in accordance with Section 32 (1), or regulations made under Section 32 (3), of the Water Resources Act 1963, by succeeding to the previous licence holder's occupation of land specified in the licence as land on which water abstracted in pursuance of the licence is to be used, you should note that, by virtue of Section 32 (2) of the above Act (or corresponding provisions in the regulations under Section 32 (3)), you will cease to be the holder of the licence at the end of a period of one month from the date on which you became the occupier of the land in question unless before the end of that period you have given the River Authority notice of the change in the occupation of the land.

### SCHEDULE. PROVISIONS OF LICENCE.

#### Source of supply and point of abstraction

1. The source of supply from which water may be abstracted in pursuance of this licence is the chalk underground strata, in the London Borough of Bexley, and abstraction may be made at any point within the area edged red on the plan reference number 1/130/GR/1 attached to this licence.

#### Authorised purposes

2. The water is to be used for the purposes of a statutory water undertaking only.

#### Authorised quantities

3. The quantities of water which may be abstracted in pursuance of this licence are limited as follows:—

- (1) 1,525,000,000 gallons in any period of 12 months ending at 9 a.m. on the 1st October; and
- (2) 7,000,000 gallons in any period of 24 hours from 9 a.m.

#### Means of abstraction

4. The means whereby the water may be abstracted shall be:—

- (1) all such wells and adits as may be constructed within the area shown edged red on the said plan, which shall be continuously lined from ground level through the Alluvium and Thurst Dams;
- (2) pumping machinery, the total capacity of which shall not exceed 9,600,000 gallons per day.

#### Measurement or assessment

5. (1) The following provisions shall apply for measurement or assessment of all quantities of water abstracted in pursuance of this licence:-

- (a) The licence holder, if a suitable meter or meters are not already installed, shall as soon as practicable, and in any event within one year from the date of this licence, install a water meter or water meters to the reasonable satisfaction in all respects of the Engineer to the Authority (hereinafter referred to as "the Engineer") whereby the entire quantity of water abstracted in pursuance of this licence is measured.
- (b) The licence holder shall read the meter(s) at the end of each year ending at 9 a.m. on the 1st October, and shall also read the meter(s) at the end of each day on which abstraction has taken place from the source of supply.
- (c) The licence holder shall keep and preserve for a period of five years from the date of each reading a record of all readings of the meter(s), and make the record available for inspection by an authorised officer of the Authority during all reasonable hours.
- (d) The licence holder shall make a return to the Engineer not later than the 1st November every year, on a form to be supplied by the Authority, of the total quantity of water abstracted in the course of the preceding year ending on the 1st October, and of the daily readings recorded during the year.
- (e) The licence holder shall maintain the meter(s) at all times in proper working order and, on receipt of a written request from the Engineer, shall at his own expense satisfy the Authority that the meter(s) are in proper working order.

(2) In the absence or failure of a meter the licence holder shall make an assessment to the satisfaction of the Engineer of the quantities of water abstracted throughout any period of such absence or failure; if the Engineer is not satisfied with the assessment made by the licence holder, the Authority shall make their own assessment of the quantities of water so abstracted which shall be final and binding for all purposes.

(3) The licence holder, if it is reasonably practicable to do so, shall measure at times nearest to the 1st October consistent with his pumping operations the level of the water in the boreholes/wells both (a) at the end of a period during which there has been no pumping and immediately before the recommencement of pumping, and (b) during a period when pumping is taking place at a steady rate; he shall record and include such measurements in the annual return to be made to the Engineer, and also the rate of pumping at the time when the level is taken when pumping is taking place.

#### Notification of additional works

6. The licence holder shall from time to time inform the Authority of any alterations or additions made to the works and equipment at the source of supply from those which were specified in the application for this licence.

add - see variation no. 1.

#### REASON FOR GRANTING OF THIS LICENCE

To secure the proper use of the water resources of the area.



NATIONAL RIVERS AUTHORITY

Variation No. 1

Licence No. 9/40/1/30GR

In pursuance of Section 42 of the Water Resources Act 1963 the above licence was on the date hereof varied by the Authority as follows:-

In the Schedule

Delete all that under the heading "Authorised Quantities" and substitute therefor:-

"Until 31st March 1991 and from 1st April 1996

Per day	31,822m <sup>3</sup>	(7,000,000 gallons)
Per annum	8296,614m <sup>3</sup>	(1,825,000,000 gallons)

From 1st April 1991 to 31st March 1996

Per day	40,000m <sup>3</sup>	(8,798,760 gallons)
Per annum	11,600,000m <sup>3</sup>	(2,551,640,400 gallons)

Subject to the Further Provision

After the Provision "Notification of additional works" and all that thereunder add

"Further Provision"

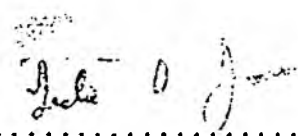
When the flow in the River Cray as measured at the Authority's gauging station at Crayford (at National Grid Reference TQ 511 746) is less than 24,000m<sup>3</sup> per day for five consecutive days, the quantities of water abstracted shall not exceed:-

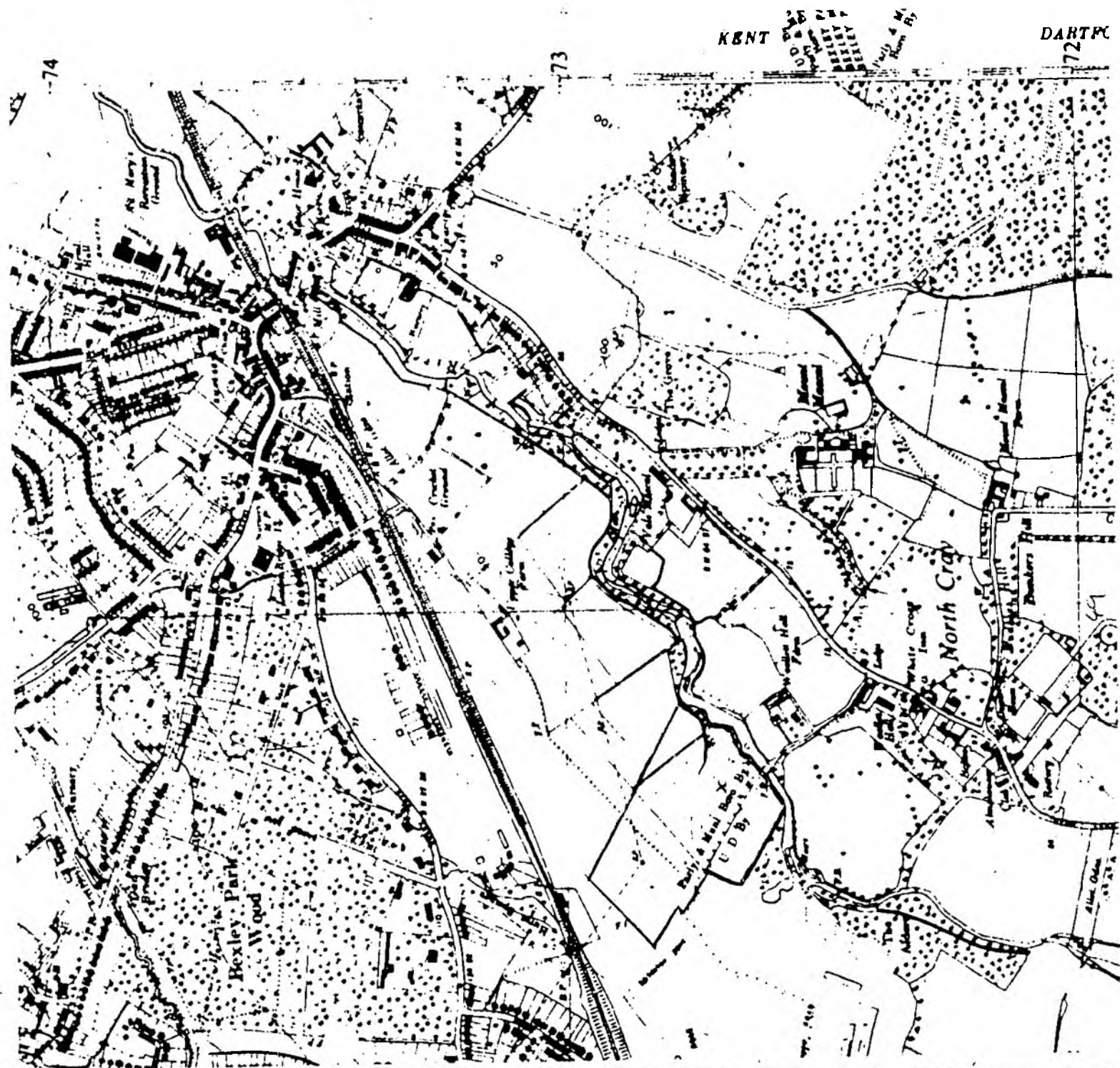
Per day 31,823m<sup>3</sup>

Provided that the licence holder shall not be required to comply with this Further Provision unless notified by the Authority".

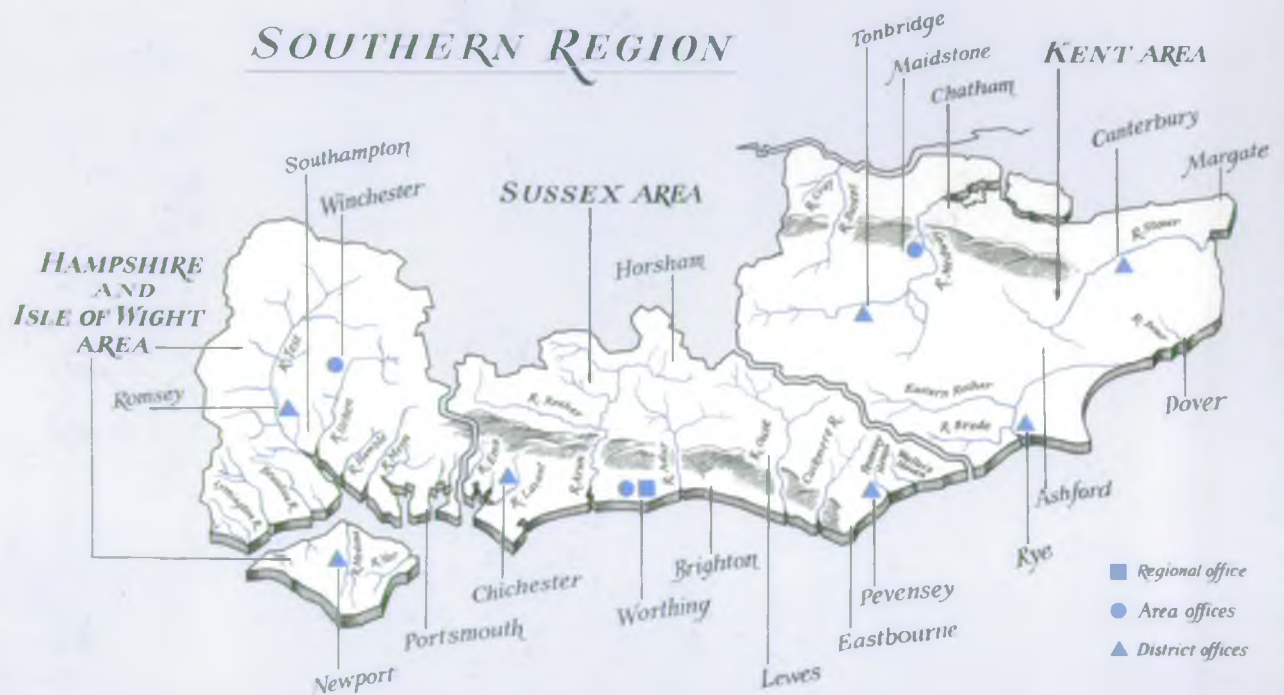
8th March 1990

Kings Meadow House  
Kings Meadow Road  
Reading  
RG1 8DB

  
.....  
Regional General Manager



## SOUTHERN REGION



**NRA**

*National Rivers Authority*

*Southern Region*

### HAMPSHIRE AREA OFFICE

Sarum Court  
Sarum Road Winchester  
Hampshire SO22 5DP  
Tel. (0962) 713267

### SUSSEX AREA OFFICE

Rivers House  
3 Liverpool Gardens Worthing  
West Sussex BN11 1TG  
Tel. (0903) 215835

### KENT AREA OFFICE

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Mill Street East Malling  
Kent ME19 6BU  
Tel. (0732) 875587

### REGIONAL OFFICE

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Worthing West Sussex BN11 1LD  
Tel. (0903) 820692