

REPORT OF THE WORKING PARTY
ON
SAFEGUARDING THE WATER RESOURCES
OF JERSEY

Chairman

Major J Riley

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INTRODUCTION

At the request of the President of the Public Services Committee, a Working Party was set up with the following terms of reference:

- 1) To consider the need for the States to introduce measures in order to manage and safeguard the Island's water resources in the light of the conclusions of the Technical Report WD/91/15 by the British Geological Survey (BGS).
- 2) To make recommendations to the Public Services Committee on the means by which better management and control can be achieved.
- 3) To have regard to all categories of consumers and to report to the Committee with as little delay as possible.

The members of the Working Party were:

Major John Riley - Chairman
Mr. Edward Potter
Dr. Hugh Thurston
Advocate Julian Clyde-Smith
Mrs. Anne Watkins
Mr. Cyril Le Bail

The first meeting was held on 26th June, 1991, and a total of 23 meetings were held. The persons interviewed are listed at Appendix I. We are grateful for the valuable information and advice presented to us by them and to the Secretaries provided to us by the Public Services Committee.

THE BGS REPORT

- 1 This scientific study sets out its main conclusions in an "Executive Summary"; this summary, taken together with the closing section entitled "Over-Exploitation or Under-Utilisation" (sections 6.1 to 6.4) sets out a disturbing scene, of which the salient conclusions are:-
 - a) The available groundwater resources are under attack from two separate directions: over-exploitation and pollution.
 - b) Except for the sand aquifer at St. Ouen, the groundwater resources of the Island are being overpumped and are not wholly replenished in a normal recharge year.
 - c) Pollution of groundwater by agricultural nutrients and also by sewage from defective soakaways is reflected in the nitrate concentration of many groundwaters.
 - d) If the present situation is allowed to continue unchecked it is likely that groundwater quality will deteriorate, and contaminated baseflow may threaten the quality of surface waters. Declining water levels in selected areas would lead to increased problems of derogation between neighbours.
 - e) The main need in the future is for reliable data. Monitoring of pumping volumes and selected groundwater levels should continue. Water quality monitoring should commence at selected pumping wells. In the meantime steps can be taken to alleviate the current attack on the groundwater resource. These may include restricting groundwater use and controlling agricultural practice. It may be useful to licence all newly-drilled boreholes and introduce some form of water law in order to manage the groundwater resources.

We find that these conclusions have generally been reinforced by the other oral and written evidence we have received, and are strongly supported by the Groundwater Review Group, which comprises five local geological specialists, under whose guidance the survey was carried out.

OVER-ABSTRACTION

- 2 The BGS Report states very clearly that Island water resources all originate from rainfall, and there is no evidence of derivation from other sources, such as underground flow.
- 3 The only certain figure of consumption is the figure for potable water that is supplied by the Jersey New Waterworks Company, see page 3 of the Jersey New Waterworks Company's submission to the Working Party, to which should be added the abstraction of large quantities of groundwater by certain large consumers for their own use, such as the Jersey Milk Marketing Board, the breweries and water carriers.

- 4 We have noted that, of the theoretical estimate of recharge of 5.5 million m³ per annum, the estimated total groundwater take is 3.7 million m³ per annum, or 70% of the available resource; a percentage which leaves little scope for weaker supplies in dry years, and one which seriously erodes the baseflow to surface reservoirs. This is also a very high percentage when compared with other islands as shown on table 9 on page 27 of the BGS Report. Acknowledging the fact that the evidence requires further confirmation in view of it having being derived from a comparatively limited number of samples, and over a short period of time, we concur with the view that it is not possible to continue to abstract 70% of the renewable resource without diminishing the level of the water table.
- 5 Notwithstanding our prejudice against yet further restrictions on individual landowners, we believe that statutory control on the abstraction and use of groundwater is now essential if the paramount interest of the community as a whole is to be safeguarded. We note that Jersey appears to be singular in Europe in not having comprehensive legislation covering the safeguarding of water resources. As fresh data is produced, the need for safeguarding the water resources of Jersey and their quality becomes more urgent. Data collated since the preparation of the BGS Report supports all the conclusions made in the Report and the opinions presented to us by experts and specialists.
- 6 The Chairman of the Board of the Jersey New Waterworks Company expressed to us his Board's view that

"The amount of water being demanded from the Island's natural water resources is increasing but because of the variety of consumers it is not at present possible to quantify that demand with accuracy. For the same reason, it is only possible to guess future demand. However, it is clear that the present potential demand for water in the Island taxes the present resource in drier than average periods."

We cannot agree with one of his Board's principal recommendations that

"the States assume ownership of all natural water in the Island, whether it is above land or beneath unless that water has been abstracted and stored by virtue of a licence."

However, we do accept the validity of most of his other recommendations with regard to the use and protection of groundwater resources.

- 7 We believe that the Jersey New Waterworks Company's submission to us is of importance, not only because of its statistical information and its relevance to that Company's responsibility under the existing Water Law, but also its Board's recognition of the general interests of the community. We commend their submission to you.
- 8 Representatives of the Agricultural and Horticultural Industries were strongly critical of some of the figures in the BGS Report on which the conclusions in relation to irrigation were based: they drew attention to the fact that the Report had been carried out over "unusually dry" periods and they questioned the method of extrapolating a limited number of abstraction points.

They claimed that much of the water used for irrigation was in fact surface water which would otherwise have gone to waste. They agreed that there was a case for licensing new boreholes, but were opposed to the licensing and/or metering of existing boreholes. However, they felt that BGS would receive co-operation from Jersey farmers in obtaining further data and in monitoring the rate of groundwater abstraction. Differing estimates of groundwater abstraction prepared by BGS and the Department of Agriculture and Fisheries are largely accommodated by relabelling the BGS estimate "use by the Agricultural community" rather than "use for irrigation". Suffice it to say that the recently constructed groundwater model indicates that, even taking the Department of Agriculture and Fisheries groundwater abstraction figure, which BGS believe to be understated, the overall Island abstraction rate is in the order of 55%, which is still unsustainable. In the U.K. it is considered that an annual take of 30% is too high.

- 9 A spokesman for the Parks and Gardens Section of the Public Services Department advised that all States playing fields are watered from their own boreholes; the trees are watered by tanker, using water collected mainly from the Rue des Pres brook (this water would otherwise go to waste onto the beaches). La Moye, Grouville and St. Clement's golfcourses all have boreholes, whilst Les Mielles is watered by pump from a pond.
- 10 The Assistant Director of the Department of Planning and Building Control explained that the Island Development Committee's policies were to encourage the conservation of water resources; in consultation with the Jersey New Waterworks Company to control development in water pollution safeguard areas and to prevent developments which relied on private sewerage systems. The sinking of boreholes was not regulated at present under the Island Planning (Jersey) Law 1964, nor any other law. The sinking of boreholes would be best controlled by a Jersey Water Authority or a similar body. Reservoirs were established subject to consent from the I.D.C. (although several had recently been established without consent) and a survey of all Island reservoirs was currently being undertaken. Consent for reservoirs was sometimes refused on the advice of other Committees that the development was not "in the best interests of the community". The I.D.C. was currently considering an amendment to the Building Bye Laws to require property owners to conserve water by rainwater collection (as in Bermuda).
- 11 Mr. N. Robins of BGS reported that findings had been updated by 6 months' additional research, but, for the Report to be reliable, monitoring needed to continue over 3 years. A computer model was being used to verify findings. With regard to over-abstraction of groundwater, he noted that the water table was down in some areas, but not others. Evidence was based partly on hearsay and partly on findings from monitoring 4 Public Services and 1 Jersey New Waterworks Company boreholes, over a 9 month period. Some groundwater resources could be used without affecting the supply, as the groundwater would otherwise go to waste to the sea. 500 boreholes were, it was claimed, being drilled per year. The fast-growing consumption of groundwater should be restricted by metering those abstracting more than 3m³ per day. Drilling companies should be required by law to obtain a permit to drill a borehole.

- 12 Dr. C. Swinnerton, of the National Rivers Authority, explained how that body executes its key duties under the Water Act 1989. He explained the steps taken in issuing a licence for abstraction, and the situation in which the National Rivers Authority prosecute. The National Rivers Authority liaise with the Public Health Authorities, who are responsible for the potability of private water resources, and the Drinking Water Inspectorate who deal with the quality of public water.
- 13 Dr C Swinnerton recommended that, if legislation were to be introduced in Jersey, it should take into account experience gained in the U.K., and that the following principles should be followed:-
 - a) any protective measures must be based on reliable data; to acquire reliable data, legislation is essential;
 - b) legislation should be promoted in such a way that current users see the new legislation as a benefit;
 - c) the cost of introducing and administering new legislation should be evaluated in the context of the consequences of taking no action;
 - d) those who draft the new legislation should work closely with experienced practitioners in water management.
- 14 The Groundwater Review Group agreed all the conclusions of the BGS Report and furthermore stressed that groundwater is an Island resource and that urgent action was required to safeguard it.

POLLUTION

- 15 We accept the findings of the BGS Report which states clearly that groundwater resources are shallow and the bedrock aquifer system is at risk. The pollution problem is aggravated by the increasing use of groundwater; the soil moisture deficit analysis leads to the conclusion that overpumping is already occurring. Agricultural and domestic pollution has had a significant impact on the shallow-fissured aquifers. Saline intrusion in coastal areas is of limited significance but the bedrock aquifers are under threat from over-pumping and pollution.
- 16 The BGS Report indicates unacceptable levels of nitrate pollution in groundwater resources. This finding is confirmed to us by other authorities, and derives both from the use of fertilisers in agricultural activities and from domestic pollution through soakaways. It was suggested that the States of Jersey were complacent about the grossly polluted groundwater, in particular about high levels of nitrates caused by a combination of agricultural products and private sewerage. The remedy was to adopt either W.H.O. or E.C. standards for groundwater quality.
- 17 The Medical Officer of Health and the States Analyst both agreed that, apart from the Jersey New Waterworks Company public supply, a large number of households were using private groundwater supplies (wells and boreholes) which were to a greater or lesser degree contaminated by nitrates, potassium and sodium (see BGS Report Appendices II to IV for samples taken in Autumn, 1990). Whilst we agree, the extent to which agricultural practice or private soakaways were responsible is difficult to determine.

- 18 Representatives of the Agricultural Industry explained that the Pesticides (Jersey) Law controlled the use of potentially harmful chemicals and that good agricultural practice should regulate the application of fertilisers and avoid a build-up of nitrates in the soil or groundwater.
- 19 The Jersey New Waterworks Company estimated that some 5,000 households were relying on private wells or boreholes and that many of these would be polluted. They expressed concern that some of the streams feeding the reservoirs had an excess of nitrates, and felt that consideration should be given to declaring "Water Sensitive Areas" where the use of potentially harmful chemicals and fertilisers should be controlled.
- 20 Both the Jersey New Waterworks Company and the Principal Engineer - Main Drainage Section of the Public Services Department, agreed that both mains water and main sewerage should be extended to all parts of the Island as rapidly as possible. We noted that, whilst the extension of mains sewerage was driven by Public Health requirements and paid for from States funds, the extension of Water Mains was constrained by the finances available to the Jersey New Waterworks Company - a public company. The Assistant Director - Building Control, of the Island Development Committee explained that, in consideration of development applications, the Committee was entitled to take the availability of suitable drainage into consideration.

ONGOING INVESTIGATION

- 21 A groundwater computer modelling exercise is being undertaken by BGS to validate the data and assumptions so far made, and is likely to be completed in the very near future. A draft of their report on the second year's work should be available early in 1992. This report will deal with the newly acquired monitoring data and the groundwater modelling and data validation exercise, and will consolidate all the investigation work to date. BGS have stated that the conclusions of their work to date support their earlier study and confirm that the groundwater resources are under threat from over-abstraction and pollution. They have stated that there has been no improvement in the situation observed as a result of last winter's recharge.

THE EXISTING LAW

- 22 We are advised by the Law Officers of the Crown that the customary law of Jersey effectually allows the owners of land unrestricted use of any water which rises on that land. The existing position can be summarised as follows:-
 - a) The owner of land upon which water rises is the exclusive owner of that water and as such has the right to make such use of it as he thinks fit, even if such use exhausts it completely.

- b) The owner of land through which water, having its source elsewhere, flows either above or below ground, is not the exclusive owner of that water. He may abstract as much of it as he needs for the use of his land, but he is not entitled to dam or divert or store or take it for use elsewhere. Such water as he does not use must be allowed to flow out of his land by its natural course, uncontaminated.
- c) Rainwater belongs to the owner of the land onto which it falls, who may do with it what he likes.
- d) In accordance with the customary law maxim "qui a le sol a le dessus et le dessous" (he who owns land owns that which is below it and that which is above it), water lying below land belongs to the owner of that land below which it lies, and he may abstract it for his own purposes even though by doing so he indirectly draws water away from beneath adjoining land.

CONCLUSIONS

- 23 We are persuaded that the groundwater resources are being depleted faster than they are being replenished.
- 24 Whilst the Jersey New Waterworks Company are presently able to maintain acceptable quality standards in the supply of water, the majority of private wells and boreholes are at risk of pollution, particularly from nitrates.
- 25 Because of the comparatively short period of time over which a limited number of samples have so far been taken, it is not possible to define the extent of the problems, which will require monitoring for at least 3 consecutive years.
- 26 We are, however, convinced that there exists an irresistible logic and argument in favour of the passing of comprehensive enabling legislation by the States in order to bring the use of water resources in Jersey under their control. Experience in other jurisdictions can be drawn upon, notably the Water Resources Act 1991 in England and Wales. Wide powers are needed in order to provide the effective controls appropriate to the situation in the Island and to its particular requirements. We have been convinced that the present customary law and such legal measures as apply to water resources are no longer adequate to achieve those safeguards which the community has a right to expect in this age.
- 27 We note that Jersey appears singular in Europe in not having comprehensive legislation governing the safeguarding, ownership and exploitation of water resources, and it has been urged on us by several witnesses that any such legislation should vest the "ownership" of all natural water in the States. We do not, however, believe that such a controversial and emotive step is necessary, and we are satisfied that sufficient controls and safeguards can be incorporated in a new Law without the States having to acquire the ownership of water.

- 28 We consider that there are certain matters which brook of no further delay, and which can be implemented without substantial new legislation. The principal one being to vest the Public Services Committee with the functions of a "Water Authority" with the responsibility for co-ordinating policy until vested with full responsibility under a new Water Law.
- 29 We believe it to be impracticable to require the registration of all domestic boreholes in advance of new legislation, but it is in the long-term interests of both commercial and agricultural users of boreholes and reservoirs to have them identified immediately in terms of capacity and location.
- 30 It is obvious to us that approval should be required before any new borehole, reservoir or soakaway be permitted. Until new legislation is enacted, we recommend that the IDC should have this authority "in the interests of the community". Unless this is done immediately, we can foresee a proliferation of new boreholes.
- 31 We welcome the 1991 Pesticides Law for the prevention of harmful chemicals entering the water supply, and recommend that the Agriculture and Fisheries Committee's existing voluntary Code of Practice in relation to fertiliser applications and crop rotation be updated and reissued. Depending on the degree of co-operation it might be necessary to incorporate "Water Sensitive Areas" into new legislation.
- 32 We were informed that E.C. limits on nitrate concentrations were unlikely to be achieved merely by voluntary compliance with present recommendations with regard to "Best Agricultural Practice". Encouragement should be given to more "organic" farming practices and the aim should be to achieve at least World Health Organisation standards of water quality as soon as possible.
- 33 We note paragraph 9.5 and Policy SE I of the Island Plan approved by the States in 1987, which stated:

"In many countries, especially those where rainfall is low or storage facilities undeveloped, water is regarded as a community property. The resource is carefully managed and conserved and the community seeks to meet need rather than demand. If it is accepted that supplies drawn from above and below ground are indivisible and that Jersey people as a whole should own the resource, it follows that the resource should be legally brought under one control. The Water Inquiry Board suggested the setting up of a Water Authority to do this. The importance of the recommendation lies in the control that can be exercised over every aspect of the resource - its abstraction, collection, treatment and supply together with the treatment and disposal of used water. The Island Development Committee will support measures to make water a community property."

Policy SE1

"The Committee will encourage the conservation and careful management of the Island's water resources."

- 34 In summary, we conclude that there is a very real danger of depleting groundwater resources by over-abstraction and in certain areas a serious risk of pollution of privately-owned wells and boreholes. This situation has arisen as a result of failure to implement the principal recommendations of the Guthrie Report of 1977:-

- a) *"All the Island's water above and below ground to be brought under one control"*
- b) *"The States set up a Water Authority to exercise this control."*

Our recommendations are set out below.

RECOMMENDATIONS

- 35 That the Public Services Committee should be vested with the function of the Water Authority with the responsibility of co-ordinating policy.
- 36 That the boreholes and reservoirs of both commercial and agricultural users should be identified.
- 37 That until such time as the new Legislation is in force, the IDC should be granted the authority to control the construction of any well, borehole, reservoir or other works by which water can be abstracted.
- 38 That, similarly and until such time that new legislation is in force, the Committee for Agriculture, in conjunction with the Jersey Farmers Union, should prepare a "voluntary" code of practice with regard to indoor and outdoor irrigation, the construction and use of boreholes and reservoirs, the benefits of crop rotation and the optimum use of fertilisers and slurry on the land.
- 39 That the present system of monitoring by BGS should be extended in order to confirm the conclusions so far drawn in relation to both the levels and quality of the Island's water resources.

None of the above recommendations requires substantial new legislation, and, in our opinion, should be implemented forthwith.

- 40 That the Public Services Committee should immediately commission the drafting of a Water Law, which would give that Committee such powers as may be necessary now or in the future to safeguard the Island's water resources with regard to both quantity and quality. A suggested brief for the principal provisions is attached at Appendix II.
- 41 That the Public Services Committee should consult with other appropriate Committees to ensure that priority be given to the further extension of mains water and mains sewerage to all parts of the Island.

FINAL OBSERVATION

- 42 In an island such as Jersey, it is essential to have a good understanding of the water resources in order for them to be protected and managed for the long-term security of supply. Failure to do this could have a catastrophic consequence on its economy, ecology and environment.

- 43 To manage the resources, the first crucial requirement is information; without this, any protective measures are based on assumption. To acquire comprehensive, reliable data, appropriate legislation is essential. It should be possible to legislate in such a way that current users see it to be to their benefit, and co-operation should be achieved. Obviously, there will be a cost for its introduction and administration, but, in our opinion, the cost will not be onerous. Compared with the potential consequences of doing nothing, the cost could be considered insignificant.

SIGNED:- Major J Riley, Chairman
Mr Edward Potter
Dr Hugh Thurston
Advocate Julian Clyde-Smith
Mrs Anne Watkins
Mr Cyril Le Bail

23rd March 1992

APPENDIX I

PERSONS INTERVIEWED:

STATES OF JERSEY CROWN OFFICES
Advocate S Nicolle

JERSEY NEW WATERWORKS COMPANY
Jurat P. Blampied
Mr. J. Hobbs

PUBLIC SERVICES DEPARTMENT
PARKS & GARDENS SECTION
Mr B. Chall

BRITISH GEOLOGICAL SURVEY
Mr N Robins
Dr S Foster

STATES OF JERSEY
MEDICAL OFFICER OF HEALTH
Dr R Grainger

STATES OF JERSEY
OFFICIAL ANALYST
Mr. P. Holliday

PUBLIC SERVICES DEPARTMENT
MAINS DRAINAGE SECTION
Mr. B. Bennie

JERSEY FARMERS UNION
Mr. L.D. Carter (President)
Mr. R.C. De Gruchy
Mr. S.G. Luce

STATES OF JERSEY
DEPARTMENT OF AGRICULTURE AND FISHERIES
Senator J. Rothwell
Mr. P. Bastion (Chief Officer)
Mr. B. De La Haye

STATES OF JERSEY
DEPARTMENT OF PLANNING & BUILDING CONTROL
Mr. P. Tucker

NATIONAL RIVERS AUTHORITY
Dr. C. Swinerton

STATES OF JERSEY
PUBLIC SERVICES DEPARTMENT
Mr. R. Culverwell

GROUNDWATER REVIEW GROUP
Dr R Nicols
Dr J Renouf
Dr M Andrews

APPENDIX II
BRIEF FOR NEW LEGISLATION

In the United Kingdom legislation to control the use of water was introduced originally under the Water Act 1945 which was followed by the Water Resources Act 1963, the Water Act 1989 and consolidated in the Water Resources Act 1991. In view of the existing close relationship between the Public Services Department and the National Rivers Authority it appears to us that the relevant parts of the United Kingdom legislation provide a useful basis from which to draw on the experience of the National Rivers Authority when preparing new legislation to suit local conditions and requirements. In our view, any legislation in Jersey would:-

1. Invest in the Public Services Committee the responsibility of a "Water Authority" whose principal function would be to take such action as it may from time to time consider to be necessary or expedient for the purpose of conserving and securing the proper use of water resources in Jersey.
2. Give power to the States of Jersey by regulation:-
 - a) To control the abstraction of water from any source of supply. Source of supply in this context would cover springs, streams, water courses, channels, reservoirs, ponds and ground waters.
 - b) To control the construction of any well, borehole or other works by which water can be abstracted.
 - c) To control the construction or alteration of any dam or other works by which water may be impounded or water flows diverted.
 - d) To require the owner of land on which there exists any borehole or well to register with the Water Authority such details as the Water Authority may from time to time determine.
 - e) To grant licences for the abstraction of water from any source of supply as follows:-
 - (i) **Domestic**

If, in the opinion of the Water Authority, water resources permit, the abstraction of water for purely domestic purposes including the use of hand held hosepipes connected to the domestic water supply within the domestic curtilage would be exempt from the requirement to hold a licence. If, in the opinion of the Water Authority, water resources do not so permit, the abstraction of water for domestic purposes will require a licence in the same way as set out in sub-clause (ii) below.
 - (ii) **Non-Domestic**

The abstraction of water for any other purpose (other than irrigation) will require a periodic licence.
 - (iii) **Irrigation**

The abstraction of water for the purpose of irrigating any land (whether covered or uncovered) other than as permitted under (i) above will require a periodic irrigation licence.

Every licence granted will specify the maximum amount of water to be abstracted daily from the source of supply, the period of the licence and the charge, if any, levied in respect thereof. The Water Authority will have the power to attach such conditions to the granting of each licence as it shall in its absolute discretion think fit including without prejudice to the generality of the foregoing a requirement that the licence holder install a meter at a licence holder's expense.

The Water Authority shall have the right to revoke or vary any licence at any time but subject thereto every licence granted shall, upon application, and the payment of any specified charge be renewed periodically. A licence holder shall be given notice of any intention of the Water Authority to revoke or vary a licence and be permitted to make representations.

Applications for new licences or for the variation of existing licences should be given the same publicity as are given to applications under the Planning Laws.

3. Allow the right of appeal to the Royal Court if an applicant for a licence to abstract water or for permission to carry out any of the works covered in Clause 2(b) and (c) above is aggrieved by the decision of the Water Authority.
4. In the case of shortage of water, give the Water Authority the power to restrict both the quantity of water abstracted under licence and the use to which water is put domestically under clause 2(e)(i) above.
5. Absolve the Water Authority from any liability to a licence holder for any deficiency in the source of supply licensed or to the owners or occupiers of any neighbouring land the water resources of which are prejudicially affected by the abstraction of water under a licence.
6. If the water resources of any property are prejudicially affected by the abstraction of water under a licence, give the owner or occupier of the property affected the right to apply to the Water Authority for that licence to be reviewed and if thought fit by the Water Authority to be varied or revoked. The applicant or the holder of the licence shall have a right of appeal to the Royal Court against the decision of the Water Authority.
7. Designate the Water Authority as the competent authority for the purpose of exercising the emergency powers contained in Article 8 of the Emergency Powers and Planning (Jersey) Law 1990 in the event of drought.
8. Give the States of Jersey power by regulation to prescribe a system of classifying the quality of water according to criteria specified in such regulations. The Water Authority would be placed under a general duty to ensure as far as practicable that the water quality objectives are achieved.
9. Prescribe pollution offences so that it would be an offence, without the consent of the Water Authority, to cause or knowingly permit any poisonous, noxious or polluting matter to enter water. A refusal to issue a consent would give rise to a right of appeal to the Royal Court.

10. Give the Water Authority the power to prohibit by notice the discharge of any effluent onto or into land, breach of which prohibition would also constitute an offence.
11. Give the States of Jersey power by regulation:-
 - a) To prescribe precautions and other steps to be carried out by persons having custody of poisonous, noxious or polluting matter.
 - b) To prevent or control the entry of any poisonous, noxious or polluting matter into water by prohibiting or restricting the carrying on of activities Island wide or in any designated area which the Water Authority considers are likely to result in the pollution of water. We have in mind in particular the control of nitrates on agricultural land.
12. Give powers of entry for inspection and enforcement purposes, and for the purpose of installing and reading meters to monitor levels of abstraction.
13. Give members of the public the right to inspect licences granted for the abstraction of water.
14. Prescribe general offences for the illegal abstraction or impounding of water and for breaches of the terms of any licence issued and any conditions thereunder. It would also be an offence to make false statements and criminal liability would be extended to directors or officers of companies which commit offences with their consent or connivance.

COMMENTARY ON NEW LEGISLATION

1 This Brief is intended to recommend to the Public Services Committee the principal provisions of a new Water Law without going into the detail required by the Law Draftsman. We further recommend that it should take account of amendments now being proposed to U.K. legislation.

2 Licences of Right

We noted that "Licences of Right" had been granted to established abstractors of water under current U.K. legislation, but that these were now considered to have been unwise and are presently under review. In the knowledge that there already exists an over-abstraction of groundwater in Jersey, we would resist the premise that the removal of an historic "right" requires compensation. They have therefore been omitted from our recommendations.

3 Charges

Whilst we recommend that there should be no charge for the registration of boreholes or wells, we believe that the Water Authority should have the ability to charge for the granting of Licences to abstract water and for the irrigation of land. The system of charging could be based on one or more of the following principles:-

- a) Cost Recovery: the minimum amount necessary to defray the costs of administering the Law, distributed equally amongst licensees.
- b) Incentive Based: designed to encourage economy in the use of water by basing the charge on the quantity of water allowed by licence to be abstracted.
- c) Marketable Permits: an innovative system presently under investigation in the U.K. and elsewhere, whereby permits for the abstraction of given quantities of water may be purchased from the Water Authority and subsequently be subject to free market forces.

We recommend that the Public Services Committee obtain further advice and examine the experience of others before deciding on a method of charging suitable to Jersey.

4 Water Quality

Our recommendations with regard to avoidance of pollution are inevitably imprecise, because of the limited information presently available. We recognise that many of the dangers are covered by other insular legislation, but nevertheless we believe they should be incorporated under the principal law administered by the Water Authority. The degree to which current agricultural and horticultural practice is contributing to an Island problem of pollution by nitrates will only be quantified by further monitoring. The balance between the environmental gain of organic farming and the loss of productivity resulting must remain a matter of conjecture. We were unable to reach unanimity on this point.

5 Domestic Supplies

Whilst we would hope that it will not be necessary to licence or control purely domestic use of privately abstracted water, except in conditions of drought, we believe the Water Authority must retain that ability. The definition of "purely domestic purposes" within the curtilage of a dwelling will require further clarification.