DEPARTMENT OF THE ENVIRONMENT  
CENTRAL UNIT ON ENVIRONMENTAL POLLUTION  

CONTROLLING POLLUTION  

A review of Government action related to recommendations by the Royal Commission on Environmental Pollution  

Pollution Paper No 4  

LONDON  
HER MAJESTY'S STATIONERY OFFICE  
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1975
This is the fourth of a series of papers to be published for the Department of the Environment on various aspects of pollution. Previous titles were:

1. The Monitoring of the Environment in the United Kingdom.
3. The Non-Agricultural Uses of Pesticides in Great Britain.
The Royal Commission on Environmental Pollution have given their Fourth Report, published late last year, the title “Pollution Control: Progress and Problems”, and this is an apt summary of the picture of the British environment they have drawn. Their survey of recent changes records the substantial environmental progress we have made over the last few years, progress which we hope will be sustained within the framework provided by the wide-ranging provisions of the Control of Pollution Act 1974. The sober and thoughtful analysis contained in the new report offers no support to those who fear that the quality of our environment is becoming widely and irretrievably degraded.

Nevertheless, the Report does point to too many areas of the environment where further attention is required for us to be free to indulge in any complacency. The Commission echo our own disappointment that because of limitations of resources some environmental improvements are taking longer to achieve than we had hoped; I think particularly of the cleaning up of our major estuaries, about which the Commission made comprehensive suggestions in their Third Report.

The Commission also point to areas where, because of the increasing scale and complexity of modern development, new environmental hazards may exist. The Commission themselves have decided to undertake an investigation into one of these areas, that of radiological safety and the problems of radioactive wastes; we are giving urgent consideration to the other problems identified in the Report.

I have recently written to the Chairman of the Royal Commission, Sir Brian Flowers, setting out in some detail our response to their recommendations. Together with a summary of the action that Government has taken following the recommendations contained in the Commission's first three reports, this letter provides a concise record of recent developments in relation to the environmental “hot spots” that the Commission have identified.

The quality of the environment is of concern to us all, and it therefore seems right to make this record available in a permanent form. As the responsible minister at the time of the establishment of the Royal Commission I am particularly pleased to do so.
# CONTENTS

## Foreword by the Secretary of State for the Environment

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Introduction</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chapter I</td>
<td>Introduction</td>
<td>1</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter II</th>
<th>Fourth Report of the Royal Commission on Environmental Pollution:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Letter from the Secretary of State for the Environment to the Chairman of the Royal Commission</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Chapter III</th>
<th>First, Second and Third Reports of the Royal Commission on Environmental Pollution:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Summary of Government action related to recommendations</td>
</tr>
</tbody>
</table>

| Annex A | Abstract of contents of the Fourth Report of the Royal Commission on Environmental Pollution | 27 |

| Annex B | Some recent official publications on pollution | 31 |
The Royal Commission on Environmental Pollution were appointed in February 1970, with a remit "to advise on matters, both national and international, concerning the pollution of the environment; on the adequacy of research in this field; and the future possibilities of danger to the environment". Both under their original Chairman, Sir Eric (now Lord) Ashby, and under the present Chairmanship of Sir Brian Flowers the Commission have seen their role as requiring them not only to investigate in depth particular topics of special environmental significance, but also to make more general information on the state of the environment readily available. The four Reports published by the Commission reflect this dual approach. The First Report and the Fourth Report consist in the main of surveys constituting an audit of arrangements for controlling pollution in the United Kingdom. In the Second Report and the Third Report, together with some parts of the Fourth Report, the Commission have turned their attention to more detailed studies of matters of particular concern. Both types of Report have contributed strongly to the quality of public debate on environmental matters in recent years.

The First Report (Cmd 4585, February 1971), after defining the role of the Commission, proceeded to summarise recent developments in the state of the natural environment as a basis for judgments on priorities for action and enquiry. On some of the subjects identified as deserving of priority treatment the Government was already receiving expert advice from other quarters, and the Commission urged the importance of prompt action on this advice. Other subjects were not, in the Commission's view, receiving sufficient attention: three of these—pollution of tidal, estuarial and coastal waters, the qualifications and training of pollution control staff, the disposal of radioactive waste—have subsequently been taken up by the Commission themselves.

The Second Report (Cmd 4894, March 1972) discussed briefly three general issues of concern to the Commission in the field of industrial pollution: the confidentiality of information about industrial wastes, the environmental impact of new products, and the urgent need for control over the disposal of toxic wastes on land.

The Third Report (Cmd 5054, September 1972) was the product of the Commission's extensive enquiries into pollution in estuaries and coastal waters, and offered detailed recommendations on administrative and legislative changes which would facilitate an improvement in the situation.

The Fourth Report (Cmd 5780, December 1974) again reviewed recent changes in the state of the British environment and set out the conclusions the Commission
had reached in the course of their study of the training and manpower requirements for pollution control staff. As with the First Report, the Commission has picked out subjects requiring further attention from the Government.

This "Pollution Paper" aims to bring together much of the government response to the recommendations contained in all four Reports. Chapter II reproduces the Secretary of State for the Environment's letter of 13th March to Sir Brian Flowers conveying his detailed reaction, and those of the Secretaries of State for Scotland and Wales, to the latest of the Reports, and indicating the ways in which these Departments expect to be able to follow up its recommendations. Chapter III consists of a tabular presentation of the recommendations made by the Commission in their first three Reports, with a summary of the steps taken by Government to meet the points they raise.

It has been possible to adopt a very large proportion of the recommendations in their entirety; for instance, the arrangements for dealing with pollution in estuaries embodied in Part II of the Control of Pollution Act 1974 follow to a large extent the suggestions made in the Commission's Third Report. In other cases, while the Government has been able to accept the objectives suggested by the Commission, it has been decided after discussion with the interested parties and, very often, with the Commission themselves, that methods other than those originally recommended by the Commission should be adopted in progressing towards those objectives. And in some areas environmental progress has been slower than the Government or the Commission would wish because the constraints imposed by the economic state of the nation require that hard choices be made not only between competing environmental demands but also between these and other claims on national expenditure. In this situation the Commission have furnished invaluable advice as to where priorities should lie.

The value of the Commission's work is not to be found solely in the explicit recommendations they have made to Government. The wealth of discussion in the four Reports, besides contributing to a healthy public awareness of environmental problems, has also set a framework within which pollution control measures have been argued out and then implemented by the various authorities at both central and local level.

There are also important aspects of pollution to which the Commission have for one reason or another so far not felt it necessary to devote detailed attention and which are therefore not treated extensively in the table in Chapter III. Notable among these is air pollution; although, in this case, the Commission are now engaged, at the invitation of the Secretary of State for the Environment, on a study of the arrangements for control of air pollution.

For these reasons it should be remembered that there are facets both of the Royal Commission's work and of Government activity in the field of pollution control which are treated only briefly or not at all in this paper. Nevertheless, over a wide range of pollution topics the developments chronicled here should serve as a convenient summary of the state of the British environment, together with some pointers to the problems likely to preoccupy us as we move into the last quarter of the century.
CHAPTER II

LETTER FROM THE SECRETARY OF STATE FOR THE ENVIRONMENT TO SIR BRIAN FLOWERS, CHAIRMAN OF THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION

13th March 1975.

Dear Sir Brian,

1. I promised when the Commission’s Fourth Report was published in December that I would write to you with our considered comments when the report had been studied more thoroughly. I am now writing also on behalf of the Secretaries of State for Scotland and Wales to give you our joint views as they relate principally to the direct responsibilities of our three Departments in the environmental field. I have not attempted to answer for other Departments to whom I believe you have also sent copies of the report.

2. First, I would like to congratulate the Commission on the very comprehensive and useful review of the current environmental situation which the report as a whole constitutes. One of the most valuable functions of the Commission has always been, I believe, to keep the whole environmental picture in perspective.

3. In addition, Commission reports highlight areas of public anxiety or in which Government should be taking more positive action. In this connection I am glad to see that this report reflects generously the extent to which the recommendations contained in the first three reports were accepted and have in most cases already been implemented by Government. Of the major priorities for action or further attention singled out in the First and Second Reports, recommendations on water supply and improved sewage treatment, on solid and toxic waste disposal and on confidentiality of information about industrial wastes have largely been met by the reorganisation of the local and water authorities and the passage of the Control of Pollution Act. Like the Commission, I very much regret the delay in implementing some features of this Act which has had to be accepted in the present economic climate, but we are doing our best to push on in those areas which do not involve significant expenditure for the authorities involved. I attach a copy of the statement which Gordon Oakes recently made in the House spelling out the timetable we now envisage for implementation.

4. Of the other recommendations for action in the First Report, the dumping of noxious substances at sea is now covered by the Dumping at Sea Act, and an investigation into radioactive waste disposal is of course being carried out by the Commission itself. The Third Report covered the pollution of tidal waters, estuaries and the inshore seas, and as you know the majority of the recommendations were accepted by the previous Government and have been incorporated in the structure of the new water authorities and the water pollution provisions.
of the Control of Pollution Act. The remaining points emphasised by the First Report are also discussed in the Fourth, and are I think most conveniently dealt with in that context below.

5. Although the Fourth Report contains relatively few positive recommendations for action by Government, it does at least imply the need for further attention in a large number of areas. It is therefore convenient to consider these areas broadly in the order in which they are treated in the report, picking up some general points such as monitoring and economics at the end.

6. **Atmospheric pollution.** As this area is subject to further consideration in the Commission's present enquiry into air pollution control there is limited value in detailed treatment at this stage. I note, however, that some concern is expressed over the rate at which smoke control is being implemented in some areas. I share this concern. While fully recognising that economic difficulties currently facing local authorities may delay progress in the short term, I would like to see improvements in the longer term. I accept too that more information is required on the effects on health and vegetation of SO$_2$ and we are taking steps to commission the necessary research. We have noted your interest in the possible effect of freons in the atmosphere upon the ozone layer, and have already undertaken more detailed investigations at your request.

7. **Waste disposal on land and reclamation.** As the report acknowledges, the comprehensive waste disposal provisions of the Control of Pollution Act should go a long way towards meeting waste problems discussed in this and previous reports. I am nonetheless aware that continued effort is required by central as well as local government to ensure that problems which are outstanding or not amenable to statutory handling are dealt with adequately.

8. The re-use of mining and extraction wastes falls into this category. I accept that the reasons for the reluctance of contractors to use this type of material could usefully be explored further to ascertain whether there are any additional steps which the Department might take to increase the use of waste material in road construction, although I think we should be careful not to get this question out of perspective. The economic and technical factors which prevent the re-use of such material, for instance for road construction, are however highly complex, and I cannot agree that reluctance to use materials which do not comply with British Standards Specifications is a significant factor, given the width of the DOE specification for this kind of material. Nor would departmental underwriting of the use of waste materials for road construction necessarily overcome the economic and technical disincentives for use of this material.

9. We are also very much aware of the help which the new authorities will need to implement the provisions of the Control of Pollution Act, and in particular procedures for dealing with toxic wastes. The report notes the work already under way on disposal procedures for toxic and difficult wastes. Various categories of special wastes are being examined in this context by Government with a view to preparing regulations and advice to local authorities; as an example of what we are doing here, a working group is looking at the question
of the disposal of waste from animal husbandry to see what needs to be done with those materials which cannot readily be recycled in the traditional manner by returning them to the soil. I would hope that local authorities will not act parochially in planning for waste disposal and that it will not be necessary for central Government to intervene to ensure that local plans add up to an adequate national system for waste disposal. There is a statutory requirement in the Control of Pollution Act that interested bodies should be consulted at planning stage and we shall also be advising authorities to consult their neighbours. In addition the Secretary of State will receive a copy of each plan so that Government will be in a good position to monitor the adequacy of planning and to take any further steps should this prove necessary. I think that the requirement under the Act for disposal authorities to publicise their plans and to invite comments should, in conjunction with the outcome of the surveys of wastes which will be undertaken, do much to meet your point about making disposal possibilities widely known.

10. While the organisation and powers of the new authorities have been in flux it has not been possible to press ahead with research in the waste disposal field. As the report notes, the next financial year will see a substantial increase in research and experimental effort; this will include a pilot scheme with Oxfordshire County Council to assess the feasibility of separating materials for re-use. The Waste Management Advisory Council which first met in December last year should additionally help us to pinpoint other areas in the highly complex and wide-ranging field of reclamation where more research work or other government measures might achieve useful results.

11. **Land dereliction.** With regard to the views expressed in paragraph 85 of the Report it is certainly our intention that the reports of the Stevens and Verney Committees should be considered in the context of a general programme for environmental improvements, in which the reclamation of derelict land and the prevention of future dereliction are integral features. It is recognised that the continued existence of derelict land militates against the economic and social recovery of the worst-affected areas and the present grant arrangements reflect this. The grants are concentrated on "loss making" schemes, ie those which would not be justified on narrow economic grounds alone; in practice the largest proportion of reclamation schemes have provided for open space and other amenity uses, although in certain areas, eg the South Wales valleys, significant areas have been reclaimed for industry, housing and other urban developments. It is the Government's intention in conjunction with local authorities to press ahead with reclamation. With the increased resources to be made available through the Government's proposals to establish Scottish and Welsh development agencies with the whole cost being met by the Exchequer, and concurrently in England the grant in the assisted areas and derelict land clearance areas being increased to 100%, it is believed that, notwithstanding the differing administrative arrangements between the three countries, the progress already demonstrated in Table 7 of your report will be accelerated to a marked degree in the near future.
12. I note that paragraph 83 mentions the effectiveness of “Operation Eyesore” in improving the environment, with a plea that its reinstatement should be considered. While I accept that there may be a good case for many areas receiving financial assistance to deal with environmental problems in this way, I regret that I cannot hold out any hope, at the present time of restrictions on public expenditure, that it would be possible to reinstate the scheme, even on a limited scale.

13. Pesticides and toxic chemicals. The report expresses some concern about the non-agricultural uses of pesticides. As you know, the study on this subject recently completed by the Department at the request of the Royal Commission (and published as Pollution Paper No. 3) included recommendations that non-agricultural uses of pesticides should be subject to control. The Government has accepted these recommendations and steps are already being taken to implement them.

14. As the report appreciates, the screening of new chemicals for possible long term environmental effects is a complex question, as is the interaction of chemicals with each other in use. Departments concerned have I believe taken all the precautions which can reasonably be taken at the present time to prevent harmful substances reaching the market or being released generally into the environment. It is I think important to retain a sense of balance on this subject: we would none of us deny the vital contribution made by chemicals in the agricultural, medical and other fields and the importance of not discouraging innovation by unreasonable safety requirements. I accept nonetheless that more research and exchange of information at both domestic and international level is necessary to try and reduce the area of uncertainty and as you know we are contributing very actively to international collaboration in this area. In addition to the initiatives described in the report we now have quite advanced plans for setting up a national register of environmentally significant chemicals to be used both by Government and industry in screening and assessing chemicals.

15. Water pollution. Apart from suggestions on monitoring, which are dealt with separately below, one of the Commission’s concerns in connection with fresh water is with nitrate levels. More research is certainly necessary as an aid to policy decisions on treatment and the Department has already commissioned work in this field.

16. I am very conscious of the Royal Commission’s views on the need to make progress in cleaning up our estuaries, and am myself disappointed in the effect which the current economic situation must have on our ability to promote general improvements in the near future. The Tyne estuary, which was suggested by the Commission as a possible “pilot” for what could be achieved by concentrating available resources in one area, is of course already the subject of a major treatment scheme on which work is still proceeding. Given the very severe financial restrictions under which the water authorities are presently operating, however, any speeding up of this scheme or concentration of resources
in particular estuaries would almost certainly involve diverting funds from other more urgent priorities in the water field; the Commission itself has recognised this to be an unacceptable alternative.

17. Marine pollution. Executive responsibility for the marine pollution matters discussed in the report lies principally with other departments. I confirm, however, that the Central Unit on Environmental Pollution within DOE is launching a study in conjunction with other departments concerned into the pollution hazards arising from offshore oil exploration and development.

18. Heavy metals. I welcome the Commission's endorsement of the Government's view that present levels of environmental lead give no immediate cause for alarm, but I accept too that a continuing research effort is needed to establish more precisely the effects on health, particularly of critical groups, of long-term exposure to relatively low levels of lead, and indeed of other heavy metals. You will know that the Government has in hand a review of the medical evidence on absorption of atmospheric lead, and this will clearly be pertinent to future policy on lead in petrol. A study of environmental mercury is nearing completion, and we intend to look in detail at the problems raised by cadmium.

19. Noise. I agree with the analysis of the problems associated with noise given in paragraphs 149-154 of the report. The Commission is right to stress the significance of aircraft and traffic noise since these are the noise sources which affect the greatest number of people. Our present endeavours to achieve real improvement in these and other areas will be greatly assisted by the Commission's observations.

20. On the particular question of noise from road vehicles the Transport and Road Research Laboratory has undertaken a good deal of further work since the Noise Advisory Council gave evidence to you. It now seems probable that the number of people exposed to $L_{10}70\text{dB}(A)$ from traffic noise will be lower than was suggested in the Noise Advisory Council publication "Noise in the Next Ten Years" which you quote in your report. New data has been derived which gives less weight nationally to the special situation in London; the growth in the number of vehicles is now expected to be less than previously forecast; and the noise from individual vehicles is expected—as a result of the introduction of the Vehicle Construction and Use Regulations 1968—to decline rather than to increase. All of these factors combine to suggest that the degree of exposure to very high noise levels from this source may be less than the Noise Advisory Council report estimated.

21. The Commission will no doubt be aware that the EEC have produced a new draft directive, which is at present under consideration, to reduce the permitted noise levels from vehicles.

22. Training and manpower requirements for pollution control staff. The report recommends a number of measures, designed principally to complete the study so far undertaken by the Commission itself, and I accept that these are matters which should be given consideration by my Department. The first of them,
that DOE should initiate the assembly of an overall picture of requirements for professional and technical staff for pollution control work faces us to a considerable extent with the timing difficulties, caused by the reorganisation of the relevant authorities and the implementation of the Control of Pollution Act, already encountered by the Commission. We are giving careful thought to the question of how far existing initiatives may be able to meet our information needs and what further investigation might be helpful at this stage.

23. The qualifications and expertise of staff engaged in various kinds of pollution work are also likely to be affected by reorganisation. One of the major benefits which should accrue from the establishment of larger local and water authorities is their ability to attract better calibre staff and to develop in-house expertise. This is particularly true in the sewage treatment field where the new, well-staffed authorities have taken over responsibility from a very large number of smaller sewage disposal authorities which in many cases could not afford high quality supervisory staff.

24. On the waste disposal side the picture is less clear because the Control of Pollution Act has considerably extended local authority functions, and the pattern of staffing is a matter for decision by the authorities themselves. I do not believe, however, that it would be right for this Department to dictate to local authorities on staff structure: different areas pose different problems, and authorities already have available different kinds of skill and experience. Attempts to produce national uniformity of structure could prove both undesirable and impractical. We are nonetheless conscious of the need to help local authorities to meet their new responsibilities. Considerable guidance has already been given in published documents and by the Department’s staff about the types of expertise relevant to the new local authority duties, and this advice will continue to be available. Staffing and training for waste disposal responsibilities are also being considered by a sub-group of the Association of County Councils with which, and with other local authority associations, we are in close contact. We are also sponsoring courses run by the Hazardous Wastes Service, AERE Harwell, to educate local authority staff in their new responsibilities under the Control of Pollution Act.

25. The need for adequate liaison between local authorities and the National Health Service is, I think, well appreciated. As you may know, a Working Party broadly representative of local government, the NHS and relevant central Government departments was set up in 1971 to ensure effective liaison during and following reorganisation of local services. Environmental Health services were dealt with in the Working Party’s report published in 1973.

26. Finally, we are giving consideration to how best we may pursue the question of training and qualification, and in particular the suggestion of a special Diploma for Pollution Control.

27. Economic considerations. I accept that there is a need for further economic work to underpin decisions on pollution control and we have been giving increasing attention to this area. One major obstacle to any rapid progress is the
lack of appropriately organised data concerning pollution control expenditures and the effect which these have upon the environment. The construction of appropriate cost measures is a major task for economic statisticians, and cost data are of little use without the matching environmental data, which also are frequently deficient. Effort will be devoted to improving data in these areas, both for ad hoc micro-economic studies and on a more generalised basis.

28. The problem of determining social costs is, in practice, one which has to be considered after expenditures have been determined. In particular areas, especially where \( \text{SO}_2 \) is concerned, work of this nature is being undertaken. Similarly, attempts to quantify damage, or reductions in damage in economic terms (social benefit) are dependent on the adequacy of existing data concerning damage effects of pollutants. Again, work towards quantifying the effects of \( \text{SO}_2 \) is being undertaken, and other pollutants will be considered as sufficient consensus concerning the nature and importance of their damage effects arises. Unfortunately the necessary scientific information is often unavailable or too imprecise to make rapid progress possible.

29. Monitoring. The report acknowledges the findings of the Government report on monitoring published in 1974 (Pollution Paper No. 1). The sectoral management groups being set up following this report will have as their prime functions the critical appraisal of existing monitoring schemes and specification of future data requirements of a kind which will be necessary and useful for policy makers. The Commission's recommendations for improving the quality of monitoring data are being drawn to the attention of these groups.

30. Further studies under way by the Commission. The Commission's views on organisational features of air pollution control and radioactive wastes will clearly be refined following the completion of the studies on which the Commission is presently engaged. I look forward with interest to the reports on these subjects.

31. Finally, I should say a word about the publication of this letter. Your report covered a good deal of ground, as does this reply, and I think that a public response would be a useful record of where we now stand. With your agreement I propose to incorporate this letter in a published paper reviewing progress made on the recommendations contained in the Commission's four reports to date. This paper will be published in the very near future. I will, of course, arrange for copies to be made available to Parliament.

Yours sincerely,

ANTHONY CROSLAND.
Mr. Terry Walker asked the Secretary of State for the Environment if he will make a statement on the implementation of the Control of Pollution Act 1974, following the circular on local government expenditure dated 23rd December 1974.

Mr. Oakes: The wide-ranging provisions of the Control of Pollution Act 1974 can only be introduced in stages, as some of them are dependent on the implementation of others. It will therefore take time to bring the Act into full operation. In view of its importance to the environment we are anxious to press ahead as quickly as possible. Some of the provisions have, however, significant implications for local authority expenditure. The need to restrict increases in such expenditure to a minimum makes it inevitable that the implementation of these provisions should be delayed.

We are inviting local authority associations to discuss with us at once the timetable and expenditure implications of the various provisions so that we can make as rapid progress as the financial constraints allow. The phasing we have in mind is as follows.

**Waste on Land**

On waste disposal, the Government have already indicated that the first priority must be to place on waste disposal authorities the duty, provided for in Part I of the Act, to survey waste and waste disposal facilities in their areas. We know that many authorities are keen to start on this survey, which will make minimal demands for new manpower, and we believe that they will find it helpful to have statutory backing. Other important provisions which we should hope to bring in quickly are those allowing local authorities to reclaim waste, to buy it for reclamation, and to dispose usefully either of the waste itself or of anything produced from it; and the provision placing a duty on local authorities to prepare—in consultation with appropriate voluntary organisations—a plan for abating litter. In addition we shall be aiming at the very early introduction of those provisions, such as the increase in penalties for existing pollution offences, which involve local authorities in little or no additional expenditure.

We have already agreed with the local authority associations that the placing of a statutory duty on waste disposal authorities to produce a formal waste disposal plan should be deferred for a year. The exact timing will need to be discussed further, as will the introduction of the licensing system for waste...
disposal sites. The Government accept that the earliest date at which we can hope to introduce these related provisions, as well as others which are less urgent, will be the beginning of the financial year 1976-77. We can, however, take advantage of the intervening period to work out with the local authority associations the form of the regulations needed to fill out the details of the licensing system.

**Pollution of Water**

As regards water pollution, the Government's aim will be to bring the main provisions of Part II of that Act into operation in two interrelated steps between the late autumn of this year and the middle of 1976.

The first step will include activating the consent system and the transitional provisions relating to consents.

The second step will consist of bringing into force the sections which make it an offence subject to specified penalties for anyone to pollute water or to discharge trade or sewage effluent without consent. The main effect will be to bring under full control any specified underground water and all tidal waters up to the 3-mile limit.

The period between now and the taking of the first step in the late autumn is needed for consultation with water authorities and other interested parties on the substance of the necessary orders and regulations; and a period of at least six months is needed between the first and second steps to allow time for dischargers to make the necessary applications for consents for discharges not covered by earlier legislation before the offence and penalty provisions are brought into force.

During roughly the same period it is proposed to activate most of the remaining provisions of Part II, including the extension of full control of all discharges of trade effluent to public sewers, the powers and duties of water authorities to remedy or forestall pollution and the provisions regarding the discharge of waste from boats. There will again be consultation with interested parties.

It is not proposed at this juncture to implement the provisions of Section 52 of the Act in so far as they relate to charges for direct discharges of trade or sewage effluent to inland and tidal waters. In the Government's view this matter calls for further study, in consultation with the National Water Council.

The Government appreciate that while the implementation of Part II of the Act in the manner described above will materially improve the system for controlling water pollution, the economic situation is bound to limit the rate at which the quality of our rivers, estuaries and coastal waters may be improved.
as a result of the new legislation, particularly where improvement depends on expenditure by water authorities, and industry, on new works and treatment processes.

**Noise**

A number of provisions in Part III of the Act dealing with the control of noise have no financial implications for local authorities. These include the provisions for simplifying and strengthening existing legislation about nuisance from noise; the making of regulations covering noise from plant or machinery; codes of practice for minimising noise; a definition of best practicable means; increased penalties for existing offences; and interpretive and supplementary provisions. We propose that these provisions should be brought into effect as soon as possible.

There are two duties imposed upon local authorities in Part III of the Act. The first of these requires an authority to inspect its area from time to time for noise nuisance and to decide upon its noise abatement zone policy. The second requires a local authority to make its noise requirements known in response to an application from anyone carrying out construction works. The first of these is similar to a duty imposed by the Public Health Act 1936 and the second will be supported by a code of practice which will be available to assist local authorities in the control of construction site noise. The financial implications in both cases therefore seem likely to be limited. We propose to consult local authorities with the object of implementing as soon as practicable the provisions dealing with noise from construction sites and allowing the establishment of noise abatement zones.

**Pollution of the Atmosphere**

As with other parts of the Act, the Government consider that the clean air provisions which place no additional financial burden on local authorities should be implemented as soon as possible. These include the provisions enabling the Secretary of State to make regulations dealing with motor fuel and the sulphur content of oil fuel; clarification of the offence of cable burning; and the increase in penalties for existing offences. Another will be the provision allowing existing enactments to be adapted to metric units.

The remaining provisions in Part IV give local authorities the power to obtain information about air pollution. These information gathering powers are likely to be used only where air pollution is a matter of real public concern and they should not involve local authorities in significant expenditure in the near future. We therefore propose to consult local authorities with the intention of bringing these provisions into effect as soon as possible.

**General**

We shall also bring into effect in the near future the provision enabling the Secretary of State to make regulations to ban or restrict the marketing or use of injurious substances.
Scotland

In Scotland the new authorities which will be responsible for implementing the provisions of the Act do not come into full operation until 16th May. Subject to consultations with them and to such modifications as may be shown to be desirable because of their later establishment, my right hon. Friend the Secretary of State for Scotland proposes that broadly the same procedures should be followed, so far as the timetable for Scotland allows.
CHAPTER III

SUMMARY OF GOVERNMENT ACTION RELATED TO RECOMMENDATIONS CONTAINED IN THE FIRST, SECOND AND THIRD REPORTS OF THE ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION


<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>I</td>
<td>Atmospheric Pollution</td>
<td>15</td>
</tr>
<tr>
<td>II</td>
<td>Freshwater and Estuarial Pollution</td>
<td>16</td>
</tr>
<tr>
<td>III</td>
<td>Marine Pollution</td>
<td>20</td>
</tr>
<tr>
<td>IV</td>
<td>Noise</td>
<td>22</td>
</tr>
<tr>
<td>V</td>
<td>Solid Wastes</td>
<td>22</td>
</tr>
<tr>
<td>VI</td>
<td>Pesticides</td>
<td>23</td>
</tr>
<tr>
<td>VII</td>
<td>Screening of New Chemicals</td>
<td>23</td>
</tr>
<tr>
<td>VIII</td>
<td>Monitoring</td>
<td>24</td>
</tr>
<tr>
<td>IX</td>
<td>Economics of Pollution Control</td>
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<td>X</td>
<td>Staffing</td>
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<td>XI</td>
<td>Availability of Information</td>
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</table>
The Clean Air Acts and the Alkali etc. Works Regulation Act should be vigorously applied.

The Government have encouraged local authorities to implement smoke control in all areas where it is desirable to do so, and this is being continued so far as it is feasible in the prevailing economic conditions, with particular stress on the areas of greatest domestic smoke problems. The number of Alkali Inspectors has been substantially increased.

Further research is needed into the long-term effects of exposure to the various components of motor exhaust fumes at low concentrations.

Research has been continuing both into emissions from motor vehicles and into possible health effects. The UK has taken an active part in studies under the auspices of the EEC into the possible health effects of particular pollutants and in particular carbon monoxide and oxides of nitrogen. A review of the evidence concerning the effects on health of exposure to levels of atmospheric lead associated with motor vehicles is currently under way.

More research is needed into the adaptation of known techniques of pollution control to particular industries and processes.

The Government recognise the continuing need for the application of known techniques of pollution control, and are encouraging work towards this both within and outside industry.

Research should continue into the global effects of atmospheric pollution; in particular, attention should be devoted to the monitoring of levels of carbon dioxide, dust and other pollutants at points remote from local sources of contamination. Research should be co-ordinated with that carried out by other countries and international agencies; and high priority should be given to the development of mathematical models.

The Meteorological Office maintains observations at Lerwick to study air pollution typical of areas remote from industry and is studying methods of improving the representativeness of the observations. Because of the difficulty of establishing satisfactory monitoring procedures no overseas monitoring stations have yet been established.

A substantial effort has been devoted by the Meteorological Office to the development of mathematical models to provide a basis for calculating the climate from basic physical and dynamical principles. These models have been employed to make preliminary studies of the sensitivity of climate to atmospheric pollution; in particular studies have been conducted as to the effect of possible changes in the chemical composition of the stratosphere arising from aircraft pollution. Studies of natural climatic fluctuations are also maintained. The UK participates actively in the relevant international programmes of the World Meteorological Organisation and the International Council of Scientific Unions. Several university groups are also involved in these studies.
II. Freshwater and estuarial pollution

First Report

Paragraph 72
Priority should be given to provision to meet the increased demand for water, e.g., by improved sewage treatment.

One of the primary objects of the water re-organisation carried out under the Water Act 1973 was to secure more efficient management of water resources; under S 24 of the Act, water authorities are required to survey resources and the likely future demand for their use and to prepare plans of action.

Paragraph 86
A comprehensive enquiry should be carried out into the extent of discharges and dumping of wastes into tidal, estuarial and coastal waters, and into the kinds of control which should be exercised.

The Commission themselves undertook this enquiry and made recommendations in their Third Report.

Paragraph 94
The administration of the whole water cycle in each river region should be integrated under a single authority.

Under the Water Act 1973 new all-purpose water authorities have been established in England and Wales along the lines recommended by the Commission. Under the Local Government (Scotland) Act 1973 a new network of river purification boards has been established for all of Scotland except the islands areas.

Paragraph 94
The qualifications and training of those who control water pollution should be improved.

See X below.

Paragraph 94
Up-to-date process and chemical engineering should be applied to the design and operation of sewerage and sewage plant.

Work on this is being carried out at the Water Research Centre and elsewhere. As a UK contribution to the NATO environmental programme, an advanced waste water treatment is being developed at Davyhulme in Manchester, and Coleshill in Birmingham. This will serve as a national test bed for sewage treatment processes, allowing investigation of physico-chemical methods of treatment, instrumentation and automation, and of methods of balancing treatment to load.

Third Report

Paragraph 20
The Government should integrate pollution control of estuaries within a national policy for waste disposal, under which waste products shall be put not where they are under least control, but where they will do least harm.

Control of Pollution Act, Pts I and II.
<table>
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<tr>
<th>Recommendation</th>
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<tr>
<td>Paragraph 21</td>
<td>In general the law should require the maximum practical abatement before discharge of all pollutants which are unlikely to be rendered harmless by natural processes.</td>
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<td>S 32 of the Control of Pollution Act will require consent from the water authority or Scottish river purification authority before the discharge of trade and sewage effluent. The authority may attach such conditions to its consent as appear necessary.</td>
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<tr>
<td>Paragraph 22</td>
<td>Steps should be taken to unify or co-ordinate the activities of authorities who are responsible for controlling pollution in estuaries. Only one authority should have executive responsibility.</td>
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<td>Water reorganisation has generally placed estuaries under the control of a single water authority. Where this is still not the case, the water authorities concerned have powers under S 6 of the Water Act 1973 to set up single executive committees to exercise the authorities' functions over the shared estuary.</td>
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<td>Paragraph 23</td>
<td>The Government should adopt two simple biological criteria for the management of estuarial waters: (i) ability to support on the mud bottom the fauna essential for sustaining sea fisheries; and (ii) ability to allow the passage of migratory fish at all states of the tide.</td>
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<td>For reasons recorded in the Official Report of the House of Commons, 5 December 1972 (cols 380-384) the Government were not able to adopt the second of the suggested biological criteria, although it is recognised as a longer-term objective.</td>
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<tr>
<td>Paragraph 24</td>
<td>The Department of the Environment should encourage river authorities to give notice to those concerned that the standard of acceptability for effluents will be raised.</td>
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<td>In the particular circumstances of individual estuaries there may sometimes be difficulty in giving precise advice as to when and to what extent improvements will be required, but the Government have recognised the importance of giving as much notice as possible of improvements.</td>
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<td>Paragraph 24</td>
<td>The Department of the Environment should reach voluntary agreement with industry that the nature and quantities of all effluents put into rivers and estuaries should be more widely disclosed.</td>
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<td>Under S 36 of the Control of Pollution Act 1974 applications for consent to discharge will have to be advertised in the press. S 41 requires water authorities to maintain registers, open to public inspection, containing details of applications and consents, and samples they have taken.</td>
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<tr>
<td>Paragraph 24</td>
<td>Local authorities should seek industry's co-operation over the disclosure of wastes discharged into sewers.</td>
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<td>S 43 of the Control of Pollution Act 1974 brings under full control all discharges of trade effluent to the sewers enabling the water authorities in all cases to obtain information they need and impose any appropriate conditions to the discharge.</td>
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<td>Recommendation</td>
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<td><strong>Paragraph 24</strong>&lt;br&gt;River authorities should take responsibility for monitoring critical substances in estuaries.</td>
<td>The Government has accepted this, and under the arrangements outlined in the report on <em>The Monitoring of the Environment in the United Kingdom</em> (Pollution Paper No 1) the Fresh Water Pollution Monitoring Management Group co-ordinated by DOE will examine the adequacy of present arrangements.</td>
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<td><strong>Paragraph 24</strong>&lt;br&gt;‘Pollution budgets’ for each major industrialised estuary should be designed so as to exploit the estuary for waste disposal, but only up to a level which does not endanger aquatic life or transgress amenity standards.</td>
<td>The establishment of regional water authorities and Scottish river purification authorities with responsibility for controlling estuarial pollution has facilitated this sort of planning. The authorities are preparing plans containing their overall programmes for water services, including the restoration or maintenance of the wholesomeness of rivers and other inland or coastal waters in their area, as required by S 24 of the Water Act 1973.</td>
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<td><strong>Paragraph 24</strong>&lt;br&gt;Planning authorities should consult river authorities before passing any plan which would increase the effluent load on an estuary.</td>
<td>In their preparation of structure and local plans, local planning authorities are bound to consult with such public authorities as they think appropriate. The Government has advised them to consult water authorities as regards available water resources, effluent disposal and land drainage. See also paragraph 30 below.</td>
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<tr>
<td><strong>Paragraph 27</strong>&lt;br&gt;All industrial and sewage effluent discharges to tidal waters and estuaries should be statutorily controlled within 12 months from the commencement of the amending legislation or from July 1974, whichever is the earlier.</td>
<td>The Government has announced that it proposes to implement the appropriate sections in Part II of the Control of Pollution Act 1974 within the next 18 months.</td>
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<td><strong>Paragraph 27</strong>&lt;br&gt;Discharges of sewage from all vessels, including naval vessels, in tidal waters and estuaries should be brought under statutory control.</td>
<td>S 33 of the Control of Pollution Act 1974 makes provision for the control of discharges of sewage from boats in inland waters and specified tidal and coastal waters; discussions concerning the control of discharges from seagoing ships are proceeding internationally.</td>
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<tr>
<td>Paragraph 27</td>
<td>The legislation setting up the new regional water authorities should provide:</td>
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<td>(i) that all discharges to sewers be controlled; In England and Wales discharges to sewers are covered by S 43 of the Control of Pollution Act 1974; and in Scotland by the Sewerage (Scotland) Act 1968.</td>
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<td>(ii) that industry be charged the full cost of waste treatment and disposal; This has been accepted, and underlies Parts I and II of the Control of Pollution Act 1974.</td>
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<td>(iii) that authorities may take samples from private sewers from trade premises. Schedule 3, paragraph 10, of the Control of Pollution Act 1974 provides that samples of trade effluent may be taken from a private drain or sewer.</td>
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<td>Paragraph 30</td>
<td>Regional water authorities should have statutory powers to control all discharges into rivers, estuaries and coastal waters. S 32, Control of Pollution Act 1974.</td>
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<tr>
<td>Paragraph 30</td>
<td>(5) Planning authorities should be required by law to consult regional water authorities before permitting any development which would add to the effluent load discharged into rivers, estuaries or coastal waters. DOE have urged local planning authorities to consult water authorities concerning developments which could entail pollution risks. (DOE Circular 12/73).</td>
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<tr>
<td>Paragraphs 33-35</td>
<td>In Scotland, the administrative adjustments proposed above should be adopted, where practicable. The present river purification boards should be retained as separate bodies outside local government, and the law should require them to be consulted by planning authorities before any development is permitted which would substantially increase the effluent load on any major industrialised estuary. The Local Government (Scotland) Act 1973 replaces from 16 May 1975 the present partial coverage of Scotland by river purification boards by a new network of boards covering the whole country (except the 3 islands areas where the islands councils will be the river purification authorities). The new river purification boards and islands councils will, under the Control of Pollution Act, have powers to control pollution of rivers, estuaries and coastal waters similar to those of the regional water authorities in England and Wales. The control of discharges to public sewers in Scotland was effected by the Sewerage (Scotland) Act 1968 which was brought into effect in May 1973.</td>
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Paragraph 41
(1) Greater effort should be devoted to developing effective mathematical models of estuaries.

(2) More attention should be given to assessing the toxicity of the most common pollutants on aquatic organisms and to examining the effects of their long-term exposure to sub-lethal concentrations.

(3) More knowledge of coastal hydrography is required for pollution control purposes.

(4) Further studies should be made of the effects of materials which are not broken down in the environment and may present possible hazards to man or other living things, and of their accumulation in muds and sediments and the conditions in which they might be released.

(5) Studies should be made of the effects of trace amounts of organochlorine and organomercury compounds on photosynthesis by marine phytoplankton.

The emphasis which is placed upon research into various aspects of marine pollution will naturally vary from time to time and from place to place within the overall pattern of increasing knowledge on pollution matters. However, among the subjects mentioned by the Commission, the effects of natural and man-made variations in the environment of marine invertebrates are being investigated with special reference to long term stress at sub-lethal levels (Institute of Marine Environmental Research); water levels in UK estuaries and coastal regions and the behaviour of sediments in the offshore zone are being investigated (Institute of Oceanographic Sciences); and the effects of heavy metals on estuarine benthic species and marine phytoplankton are being investigated (Marine Biological Association). These and other research projects are sponsored wholly or in part by various Government departments.

The Commission's Fourth Report acknowledges (paragraph 114) the extent to which models for industrialised estuaries are now being developed, with particular reference to the Tees (see IX below).

III. Marine pollution

First Report
Paragraph 72
Priority should be given to the control of dumping of noxious materials at sea.

Dumping at Sea Act 1974.

Third Report
Paragraph 27
Legislation to implement the Oslo Convention on the Control of Pollution by Dumping from Ships and Aircraft in the North East Atlantic should be introduced as a matter of priority.

Dumping at Sea Act 1974.

Paragraph 32
Sea Fisheries committees should be retained.

Sea Fisheries Committees will be retained, but their pollution control functions will be relinquished when Part II of the Control of Pollution Act is brought into effect.
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<th>Recommendation</th>
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<tr>
<td><strong>Paragraph 37</strong>&lt;br&gt;The Government should take a&lt;br&gt;lead in reaching international&lt;br&gt;agreement for the publication of&lt;br&gt;data on monitoring and estimates&lt;br&gt;of the masses of certain pollutants&lt;br&gt;entering the sea.</td>
<td>A Marine Pollution Monitoring Management Group has been established under the chairmanship of the Ministry of Agriculture, Fisheries and Food. The work of this Group (within the context of the arrangements detailed in VIII below) will be closely linked with the environmental monitoring arrangements now being worked out at the European and global levels, in which the United Kingdom is taking a leading role.</td>
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<td><strong>Paragraph 38</strong>&lt;br&gt;Contingency plans should be&lt;br&gt;prepared to deal with any&lt;br&gt;accident at sea involving&lt;br&gt;hazardous cargoes which might&lt;br&gt;affect our coastline.</td>
<td>The Department of Trade have organised a&lt;br&gt;system of registering the loss of hazardous&lt;br&gt;materials overboard or washed ashore to their&lt;br&gt;Principal Officers, and to coastguards and other&lt;br&gt;authorities who may become involved. A working&lt;br&gt;party organised by the Department of Trade is&lt;br&gt;considering emergency arrangements to cover&lt;br&gt;hazards arising from major spillages from bulk&lt;br&gt;chemicals and liquefied gas tankers. DOE Circular&lt;br&gt;123/74 has urged local authorities to prepare&lt;br&gt;contingency plans for dealing with hazardous&lt;br&gt;materials washed ashore.</td>
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<td><strong>Paragraph 38</strong>&lt;br&gt;Measures should be agreed&lt;br&gt;internationally for the immediate&lt;br&gt;dissemination of details of the&lt;br&gt;type of product involved in any&lt;br&gt;such accident.</td>
<td>The early warning reporting arrangements of the&lt;br&gt;Department of Trade detailed above extend to the&lt;br&gt;authorities of North European countries. The&lt;br&gt;International Convention for the Prevention of&lt;br&gt;Pollution from Ships, 1973, requires reports on&lt;br&gt;incidents involving harmful substances to be made&lt;br&gt;and to be relayed without delay to the administration&lt;br&gt;of the ship involved and to any other state which&lt;br&gt;may be affected. However, this Convention is not&lt;br&gt;yet in force and has not yet been ratified by the&lt;br&gt;United Kingdom.</td>
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<td><strong>Paragraph 80</strong>&lt;br&gt;Further enquiry and research is&lt;br&gt;needed before some forms of&lt;br&gt;dredging or drilling of the deep&lt;br&gt;sea floor are permitted.</td>
<td>The UK is playing an active part in the UN&lt;br&gt;Conference on the Law of the Sea, the Third&lt;br&gt;Session of which is at present taking place in&lt;br&gt;Geneva. One of the objectives of the Conference is&lt;br&gt;to achieve international agreement on arrangements&lt;br&gt;for the care and development of the marine environ­&lt;br&gt;ment and its resources, which would cover both&lt;br&gt;jurisdictional questions and the regulation of seabed&lt;br&gt;exploration and exploitation so as - inter alia -&lt;br&gt;to prevent, reduce and control pollution. In this&lt;br&gt;context the Government is keeping under review&lt;br&gt;the research effort being undertaken in this country,&lt;br&gt;as well as in other parts of the world, into the&lt;br&gt;consequences for the marine environment of new&lt;br&gt;technologies for the development of the resources&lt;br&gt;in and under the seas.</td>
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<td><strong>IV. Noise</strong></td>
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<td><em>First Report</em></td>
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<tr>
<td>Paragraph 72</td>
<td>Important new provisions are contained in Part III of the Control of Pollution Act 1974. The Land Compensation Act 1973 also does much to protect people against noise, mainly from aircraft and vehicles.</td>
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| **V. Solid wastes** |  |
| *First Report* |  |
| Paragraph 44 | Part I of the Control of Pollution Act 1974 will require collection authorities to arrange for the collection of household waste and will make any deposit of waste other than on a licensed site an offence. A Report of a Working Group on the Disposal of Awkward Household Wastes was published in 1974. |
| Paragraph 72 | The Deposit of Poisonous Waste Act 1972 prohibited the deposit of toxic waste in circumstances creating an environmental hazard and introduced a notification system for the disposal of such waste. These provisions will be replaced by more stringent ones under the Control of Pollution Act 1974. |
| Paragraph 131 | The Royal Commission have themselves now decided to investigate three aspects of radiological safety, including the disposal of radioactive waste. The Government welcomes this enquiry and is co-operating in the provision of evidence. |

| *Second Report* |  |
| Paragraph 31 | The Deposit of Poisonous Waste Act 1972 (and subsequently the Control of Pollution Act 1974) incorporate provisions similar to those recommended by the Royal Commission. |
VI. Pesticides

First Report
Paragraphs 89–90
Continuing appraisal of all pesticides used in this country is needed; more persistent types should be replaced as rapidly as possible. The system of voluntary control of pesticides should be replaced by statutory arrangements.

Subsequent to these recommendations, discussions were held between the Royal Commission and the Advisory Committee on Pesticides and Other Toxic Chemicals. As a result the Commission now accept the Government's view that the existing voluntary scheme of control (the Pesticides Safety Precautions Scheme) is in general working satisfactorily, and that its replacement by a statutory system of controls would not at present be justified. The Scheme is being extended to take in most of the non-agricultural uses of pesticides, which are currently outside its scope. This follows recommendations made in the report of a survey carried out by the Central Unit on Environmental Pollution, noe, published as Pollution Paper No 3. The Commission's Fourth Report acknowledges (paragraphs 95–99) the work of the Advisory Committee in the appraisal of pesticides and the phasing out of the more persistent types, which is continuing.

VII. Screening of new chemicals

Second Report
Paragraphs 11–18
An 'early warning system' is needed for the impact on the environment of certain types of new substances intended for commercial production.

The United Kingdom is participating in a study under the auspices of OECD of possible internationally compatible arrangements for the screening of new chemicals. The work being carried out by the Health and Safety Executive on the screening of new substances in the workplace also has considerable relevance to the environment, and the data networks mentioned below will contribute towards the early identification of environmentally harmful substances.

Paragraphs 11–18
An international data bank on known correlations between chemical structure and environmental effect should be established.

DcE have now appointed consultants to help design and develop a national Data Network on Environmentally Significant Chemicals (DESCNET) which will be linked into the International Register of Potentially Toxic Chemicals being planned under the auspices of the United Nations Environment Programme and its EEC counterpart.
**VIII. Monitoring**

**First Report**
Paragraphs 87-88
Improved techniques for monitoring pollution should be developed internationally.

A report on *The Monitoring of the Environment in the United Kingdom* (Pollution Paper No 1) produced in 1974 by the Central Unit on Environmental Pollution, Department of the Environment, sets out in some detail the present and proposed arrangements for monitoring, both in a national and international context. Arrangements are now in hand to transform the numerous monitoring programmes within the UK into a co-ordinated system. This, as well as serving national needs, will provide input to the Global Environmental Monitoring System (GEMS), which is part of the United Nations Environment Programme and is concerned with the monitoring of global pollution problems.

**Third Report**
Paragraph 40
On monitoring of estuarine and coastal waters:

(i) Essential substances should be monitored; there should also be biological monitoring of certain 'indicator' species.

(ii) Regional water authorities should be made responsible for monitoring discharges to estuarine and coastal waters.

(iii) Offshore monitoring stations should be set up and operated for the UK by an appropriate department of central government.

DOE are in the process of establishing a Biological Health Monitoring Management Group (additional to those in paragraph 56 of Pollution Paper No 1) specifically charged with the monitoring of indicator plant and animal species in all sectors of the environment. This will work together with, inter alia, the Marine Pollution Monitoring Management Group.

See II above.

The Marine Pollution Monitoring Management Group will consider, in conjunction with the responsible authorities at the central and local levels, all aspects of monitoring of the marine environment, including the need for offshore monitoring stations.
# IX. Economics of pollution control

**First Report**

**Paragraphs 83–84**

More attention should be devoted to the economics of pollution control.

- Within the Department of the Environment a Division has been set up concerned with the economics of environmental pollution, covering water, air and solid waste.

**Paragraph 95**

The Government should make arrangements for a study of the costs of different degrees and kinds of pollution and of pollution abatement; the extent and manner in which different sources contribute to pollution; and the likely trends in these sources.

- Among other work the new Division noted above has been concerned with the costs of abatement of various forms of pollution and with establishing a data base for extending work on the economics of pollution control.

**Third Report**

**Paragraph 42**

The Government should examine the case for adopting a system of charges for the control of pollution; a minority recommendation was that the Government should as a matter of policy adopt a system of charges forthwith.

- The Government are examining the feasibility of charging systems; a pilot study of the discharges of effluent to the Tees estuary and the costs of controlling them is under way in order to investigate the relative merits of charging systems and more traditional arrangements for pollution control.

# X. Staffing

**First Report**

**Paragraph 85**

More attention should be given to the qualifications and training of those who control air and water pollution.

- The Commission themselves decided in 1972 to carry out a study of the training and manpower requirements for pollution control staff, the conclusions of which are set out in their Fourth Report.
**XI. Availability of information**

**Second Report**
Paragraph 10

The Government should devise measures which will increase the availability and flow of information on the production and disposal of effluents and wastes.

The Control of Pollution Act 1974 contains important new powers for increasing the availability of this information; in particular, a waste disposal authority is required, under §2, to give publicity to its waste disposal plan, and under §6, to keep a register, open to public inspection, of the site licences it issues; §41 requires that a water authority keep a public register of consents to discharges and samples; §64 requires that a local authority make a noise level register available for public inspection, and §79 empowers a local authority to publish information on air pollution problems. In all cases there are safeguards to ensure that these powers are not used irresponsibly or where there are good reasons for non-disclosure.

**Third Report**
Paragraph 24

The nature and quantities of all effluents put into rivers and estuaries should be more widely disclosed.

See II above.
ANNEX A

ROYAL COMMISSION ON ENVIRONMENTAL POLLUTION:
FOURTH REPORT

ABSTRACT OF CONTENTS WITH PARTICULAR EMPHASIS ON
RECOMMENDATIONS FOR ACTION

Global Problems (paras 14, 138/9, 226)
Dissolved CO₂ in the surface waters of the oceans is not likely to be a serious
problem. Freons in the atmosphere as a danger to the ozone layer are a problem
on which the Commission intend to make specific inquiries.

New Chemicals (paras 14, 100–103, 226)
The Commission remains concerned about the problem of foreseeing the effects
of new chemicals on the environment in spite of data banks, measures taken in
the Health and Safety Act, the Control of Pollution Act and existing screening
procedures. The OECD study and other international initiatives in this area
are noted.

Information Centres (para 16)
The Commission welcomes the establishment of information centres where
results of international research are collected and made available to Government,
industry and the public.

Energy (para 17)
Mentions the need to consider the pollution implications of different patterns
of energy production and draws attention to the possibilities of developing
non-polluting sources of energy.

Nuclear Energy (paras 18, 155–9, 221/2)
The Commission’s own study into radiological safety is described.

Control of Pollution Act (paras 19–23)
The Commission hopes that powers reserved to the Secretary of State will be
exercised in accordance with the principle that there should be the fullest
possible disclosure about wastes discharged to the environment.

There is a plea for early implementation of provisions, notwithstanding financial
restrictions placed on local and water authorities. “At the very least there
should be permitted no further deterioration in environmental quality”.

27
SO₂, smoke, grit (paras 40–44)
The slow progress on smoke control in some areas is noted, as is the dearth of information on the effects of SO₂ on vegetation. Grit and dust continue to be a nuisance—little change in measured deposition is noted in the National Survey of Air Pollution.

Asbestos (paras 45/46)
The need for quantitative information about exposure around building sites and factories is noted, and about the amount found in the lungs of patients with mesotheliomas. Stricter regulations for the disposal and covering of solid waste are needed.

Industrial and general wastes (paras 53–55)
There is a positive recommendation that DOE should encourage the greater use of mining and quarrying wastes for road construction purposes, and two lines of approach are suggested—underwriting of waste material use by Road Construction Units and extension of British Standard Specifications.

Toxic and dangerous materials (paras 56–59)
Implies the need for DOE to prepare a national plan in consultation with local authorities for disposal of difficult wastes. Emphasises the need for publicity and advice to back up legislation, particularly in the domestic sector.

Household refuse and reclamation (paras 61–64)
There is a need for more research and development effort both to get rid of large volumes of waste and to extract useful materials and energy from them. In particular there is a need for large-scale plant to be sponsored in order to gain operating experience with novel systems.

Litter (para 65)
The possible need for a "Blitzkrieg" to alter public attitudes.

Reclamation (paras 66–75)
The possibility of standardising bottles for re-use. The need for Government participation and possibly subsidy to stabilise markets for reclaimed materials, especially paper. Positive recommendation that large-scale development work should be sponsored by DOE on separation of waste material. Positive recommendation that work is also required on the problems of separation and storage of waste materials by households.

Land dereliction (paras 76–85)
The possible need for a survey of attitudes to dereliction as an aid to planning. Implied need for faster action. Positive recommendation that a scheme similar to "Operation Eyesore" should be revived by Government.
**Agricultural pollution** (paras 86–94)

Remaining problems in dealing with cattle, pig and poultry manure, especially smell and heavy metal content. Need for further consideration of the use of waste food for pigs. Need to ensure that effluent and smell problems are adequately covered in planning applications.

**Pesticides** (paras 95–98, 220)

Positive recommendation for stronger controls over non-agricultural uses of pesticides, by Codes of Practice in appropriate areas.

**Pollution of inland waters** (paras 104–109)

The need for better data, particularly on flow volumes of relevant rivers, for surveying trends. Importance of continuing improvements, which must take account of the state of the river banks and air quality, as well as water quality. Urgent need for research on nitrates.

**Pollution of estuaries and tidal waters** (paras 110–116, 215)

Concern for the low priority allocated by Government to the cleaning of estuaries. The need for positive encouragement and support from DOE to a target for improvement. The Commission invite DOE to consider, in consultation with the water authorities, whether there would be virtue in concentrating available resources on a particular estuary and instance the Tyne as a possible candidate.

**Pollution of the high seas** (paras 117–139)

Possible need for further work in connection with exploitation of North Sea Oil. Tankers working in the North Sea may need special equipment to improve their manoeuvrability.

**Heavy Metals** (paras 140–148)

More research is required on pathways of lead from vehicles to the body and on health effects.

In considering exposure, more attention should be paid to critical groups (as opposed to the 'average' intake). More information is needed both to determine long-term effects of relatively low exposures, and to determine the effects of interaction between different metals (eg mercury and selenium in tuna fish).

**Noise** (paras 149–154, 224)

Suggestion that the solution of traffic noise may require a fundamental change in transport strategy; in particular the distribution of freight between road, rail and waterway. Imposition of progressively lower limits for aircraft noise seen as essential for progress in this case. Urges reduction in vehicle noise limits currently specified in EEC Directive.
Training and Manpower for Pollution Control Staff

Given the reorganisation of local government and the new powers to be given to local and water authorities under the Control of Pollution Act, the Commission conclude that it would not be helpful to continue the study at the present time. On the limited investigation that has already been made they recommend:

(a) that DOE with other appropriate bodies should assemble an overall picture of requirements for pollution control staff at all levels of Government and in industry;

(b) that consideration should be given to the desirability of further specialisation for pollution control staff in the environmental health departments of local authorities;

(c) that DOE should take the lead with appropriate institutions in preparing guidelines for structure and staffing of the specialist teams at levels dealing with waste disposal, and considering the back-up facilities that are needed;

(d) that thought should be given to the adequacy of staff engaged at sewage works; they endorse the recommendations of the Jeger Committee regarding the qualifications that should be held by the managers of sewage treatment works;

(e) that there should be further training for pollution control based on an honours degree in a relevant basic discipline and possibly also a new professional Diploma in Pollution Control. This matter should be considered further by the institutions in the Council of Engineering Institutions and the Council of Scientific and Technical Institutions.

Economic considerations (para 218)

Further economic work needs to be done. The adequacy of resources devoted to this work is questioned.

Monitoring (para 219)

Need for more reliable information in a number of areas, and a critical appraisal of the monitoring scheme.

North Sea Oil (paras 220–228)

Present arrangements seem adequate but the situation needs to be kept under review—particularly the structural integrity of oil production platforms.

Organisational issues (paras 229–231)

The Commission's own study of air pollution control is described. Whenever possible, pollution control should be a local responsibility. The need to develop more comprehensive expertise at local level, with particular reference to planning decisions.
ANNEX B

SOME RECENT OFFICIAL PUBLICATIONS ON POLLUTION


A Background to Water Reorganisation in England and Wales 1973

Clean Air Today 1974


War on Waste: a Policy for Reclamation (Cmd 5727) 1974

Annual Report on Alkali, etc Works 1973

The Monitoring of the Environment in the United Kingdom (Pollution Paper No. 1) 1974

Lead in the Environment and its Significance to Man (Pollution Paper No. 2) 1974

The Non-Agricultural Uses of Pesticides in Great Britain (Pollution Paper No. 3) 1974