

N.R.A - Welsh Region

REGIONAL TECHNICAL (PLANNING)

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**SUPPLEMENTARY PAPER
IN SUPPORT OF THE
PROPOSED WATER
PROTECTION ZONE
(RIVER DEE CATCHMENT)
DESIGNATION ORDER**

AAC



NRA

*National Rivers Authority
Welsh Region*

THE WATER PROTECTION ZONE (RIVER-DEE CATCHMENT)

DESIGNATION ORDER

SUPPLEMENTARY PAPER IN SUPPORT OF THE APPLICATION

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ENVIRONMENT AGENCY



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PART 1

INTRODUCTION

- 1.1 This paper contains explanatory material and other relevant information in support of the application for the proposed Order and should be seen as illustrative rather than definitive of the NRA's case for the Order. It has been designed to accompany the draft Order which is being submitted to the Secretary of State for the Environment and the Secretary of State for Wales. The draft Order is also available for public inspection.
- 1.2 Under the procedure laid down in Schedule 11 to the Water Resources Act 1991 (see Appendix 1), when the NRA applies for an Order to designate a water protection zone, it is required to submit a draft of the Order applied for to the relevant Secretaries of State and to publicise the application in the local press and the London Gazette. Objections can then be made to the Secretaries of State within 28 days and, in this case, that period is expected to expire on 23rd March 1994. Any such objections or other representations to the present application can be addressed to the Secretary of State for the Environment and the Secretary of State for Wales, the Welsh Office, Cathays Park, Cardiff, CF1 3NQ.
- 1.3 After the end of the objection period, the Secretaries of State may, if they consider it appropriate to do so, hold a local inquiry before making any Order on the application.
- 1.4 Copies of the draft Order, the accompanying map and this paper can be inspected at and copies obtained from the addresses listed below. Requests for further information may also be made to the contacts listed below at these addresses:-

The NRA
Shire Hall
Mold
Clwyd CH7 6FA

Contact:
Hilary Smith
Tel: 0352 700176
Fax: 0352 756364

The NRA
Rivers House
St. Mellons Business Park
St Mellons
Cardiff CF3 0LT

Contact:
Geoff Champion
Tel: 0222 770088
Fax: 0222 798555

Dyson Bell Martin
Parliamentary Agents & Solicitors
1 Dean Farrar Street
Westminster, London SW1H 0DY

Contact:
Paul Thompson or Robert Owen
Tel: 071 222 9458
Fax: 071 222 0650

PART 2

THE RIVER DEE AND POLLUTION INCIDENTS

- 2.1 The River Dee runs from sources in Snowdonia through Corwen, Llangollen and Chester to the Dee Estuary which separates Wales from the Wirral.
- 2.2 Upstream of Chester Weir, the river is a major source of drinking water. It is this part of the river and its catchment area shown on the map accompanying the application for the Order which it is proposed should become a water protection zone.
- 2.3 The River Dee provides drinking ("potable") water for more than two million people in north-east Wales, Cheshire and Merseyside and is as such one of the most significant rivers in the UK for public water supplies. However, the river has a history of contamination caused by accidental spillages from industrial sites and is particularly vulnerable to such pollution because of the large numbers of industrial sites located upstream of the water supply abstraction points.
- 2.4 The most serious pollution incident to date occurred in January 1984, when phenol polluted the river and contaminated water entered the intakes of treatment plants which supply the two million inhabitants of north-east Wales, Cheshire and Merseyside. The processes in the water treatment plants converted the phenol into chlorine derivatives, which had a much stronger taste and odour than the original pollutant. This incident led to many complaints, shutdown of the water treatment works and concern about health effects.
- 2.5 Incidents, which are potentially as serious as the 1984 incident, continue to occur at an unacceptable frequency and, since 1984, there have been six further pollution incidents which were classified as falling within the most serious category. In the four years 1990-93, there have been a total of 155 pollution incidents on the River Dee. Of these, none qualified for the most serious category but 17 were categorised as of medium severity and required the shutdown of the drinking water abstractions.
- 2.6 Industrial usage in the catchment area remains high and, in spite of intensive monitoring and some voluntary improvement by industry, it is still possible for the present unsatisfactory number of incidents to continue and for an incident comparable to, or more serious than, the 1984 incident to occur at any time. Improved monitoring and communication systems, introduced since the 1984 incident, give warning of pollution incidents and help in their management. However, they do nothing to prevent the incidents occurring.

PART 3

WATER PROTECTION ZONING AS A MEANS OF CONTROL

- 3.1 One of the prime functions of the NRA is the control of water pollution in rivers. This role includes a duty under section 15 of the Water Resources Act 1991 to have regard to the obligations of the water companies to supply "wholesome" drinking water (section 68, Water Industry Act 1991).
- 3.2 Section 93 of the Water Resources Act 1991 (see Appendix I) enables the Secretary of State for the Environment and with the Secretary of State for Wales (acting jointly in respect of cross border applications), after consultation with the Minister of Agriculture, Fisheries and Food (in the case of an area wholly or partly in England) and upon the application of the NRA, by order, to make provision -
- (a) designating an area as a water protection zone; and
 - (b) prohibiting or restricting the carrying on in the designated area of such activities as may be specified or described in the Order,
- where the Secretaries of State consider it appropriate, with a view to preventing or controlling the entry of poisonous, noxious or polluting matter into "controlled waters" (i.e. watercourses etc.), to prohibit or restrict the carrying on in that area of activities which they consider are likely to result in the pollution of any such waters. The exercise of the powers of section 93 is dependant upon the NRA making application for an Order.
- 3.3 The NRA is applying for the designation of the Dee Catchment area as a water protection zone because it believes this to be the most effective way to address the existing pollution problems on the river upstream of Chester Weir. As well as helping to secure the drinking water supply, the proposed water protection zone will have the additional advantage of conferring significant general environmental benefits, because the precautionary measures which will be required will reduce the frequency and magnitude of spillages which cause environmental damage as well as those which threaten water supplies.
- 3.4 The proposed Order will not eliminate pollution incidents within the catchment area but will reduce the number of such incidents and should make a serious incident extremely unlikely.
- 3.5 The objective of the proposed Order is to reduce the risk of significant pollution incidents at source by introducing controls directed only at activities which do have the potential to cause a shutdown of water abstraction. As such, the proposal is in accord with the general principle of seeking prevention rather than cure.
- 3.6 A key element of the proposal is that improvements at industrial sites would be targeted at real risk areas and would not require blanket improvements. This is an approach that is understood to be favoured by the insurance industry now examining the effects of EC policy on industrial insurance. This approach is less expensive than general purpose controls in that it both targets the real risk and only affects industries in especially sensitive catchments.
- 3.7 Within the NRA, savings would be made in relation to the management of incidents and savings in the time and resources spent on prosecutions.
- 3.8 The occurrence of a major incident on the River Dee, with closure of all intakes for a protracted period, could have very high costs, both to industry and the general population, with some serious disruption of normal life in some urban areas. These costs have not been calculated in any detail, but could be expected to be many millions of pounds for a single major incident.

3.9 Expected benefits of the Order are:-

- (i) A reduction in risks to consumers (approximately 2 million people), caused by the contamination of drinking water supplies from substances spilling or leaching into the River Dee or its tributaries.
- (ii) A reduction in the number of periods of shutdown of drinking water abstractions, which can be expensive for water companies and which have their own public health implications, if the supply is interrupted at the consumer's tap.
- (iii) Targeting of expenditure. The risk assessment techniques, which would be used to implement protection zone controls, allow the targeting of expenditure by industry to the priority areas for pollution prevention. This is a more cost-effective approach than the use of blanket measures.
- (iv) Protection of the riverine environment. The measures which need to be taken to reduce the risk to consumers of drinking water will have the secondary benefit of providing protection of the riverine environment, particularly as respects the fishery. The Dee is an important salmonid river with a capital value estimated to be approximately £9 million.

3.10 In its Observations on the Third Report of the House of Commons' Environment Committee entitled "Pollution of Rivers and Estuaries" (Session 1986-87), the Government specifically stated, in relation to the River Dee catchment, that it was a notable example of a river vulnerable to pollution from diffuse sources including run-off and spillages, as it combined major chemical stores and industrial processes on the river banks, with major abstractions downstream. The Observations went on to say that the Government welcomed the proposal, by the then Welsh Water Authority, to establish protection zones, to reduce pollution risks, under the powers at that time conferred by section 31(5) of the Control of Pollution Act 1974 which section 93 of the Water Resources Act 1991 replaces.

3.11 The Government stated in its 1986 Consultation paper, entitled "The Water Environment : The Next Steps", that water protection zones will be used mainly for the protection of certain sensitive water resources from the indirect pollution which can be caused by normal everyday activities. Aquifers, stretches of major rivers from which there is direct abstraction, and the gathering grounds of reservoirs, were identified as being key areas at risk.

3.12 It may also be noted that, in its 16th report entitled "Freshwater Quality", (Cm. 1966, June 1992), the Royal Commission on Environmental Pollution referred to the proposals for a water protection zone on the River Dee (para 9.18) and recommended "that the water regulatory authorities draw up lists of vulnerable watercourses which might benefit from such protection, particularly those that are threatened by activities not susceptible to control through the land use planning system and that the Government consider favourably applications from them for designation of protection zones".

3.13 The NRA currently has no other protection zone proposals but it is feasible that a small number of other rivers may be identified in the future where the application of water protection zone controls could be appropriate to safeguard potable water supplies.

3.14 It is also possible that water protection zone powers might be sought in the future for the protection of groundwater if the non-statutory Groundwater Protection Policy, which is currently being promoted by the NRA and seeks to protect these waters by a land-use planning approach rather than by considering individual industries, should prove ineffectual.

PART 4

THE PROPOSAL IN OUTLINE

- 4.1 The proposed Order would prohibit without the consent of the NRA the keeping or use within the catchment area of certain substances known in the draft Order as "controlled substances" and there defined to include certain chemicals and substances, liquid food and feeding stuffs and other products present on a site in certain quantities. The minimum quantities subject to control are -
- in the case of food and feeding stuffs other than defined dangerous substances, an amount in excess of 500 litres;
 - in other cases, an amount equal to or in excess of 50 litres when the substance is present in a single container but otherwise 200 litres.
- 4.2 The following would be exempt from control:-
- (a) construction sites;
 - (b) petrol stations;
 - (c) agricultural units;
 - (d) sites subject to Integrated Pollution Control.
- 4.3 Deemed consent would be obtainable in respect of activities commenced prior to the application for the Order, such consents to be reviewable two years after the coming into force of the Order.
- 4.4 The NRA would be able to grant protection zone consent either unconditionally or subject to conditions or to refuse protection zone consent. Where practicable, the NRA proposes to grant consent in relation to substances forming part of one application on a generic basis so as to limit the need for further applications when additional substances of a like nature are kept or used. The conditions which the NRA would be permitted to impose would be limited to those which it considers appropriate for ensuring that, in carrying on a prescribed activity, the best available techniques not entailing excessive cost (i.e. the BATNEEC criteria to be found in the Environmental Protection Act 1990) will be used for preventing the direct or indirect release of a controlled substance into any inland waters in the vicinity of the catchment control site or, where that is not practicable by such means, for reducing the release of such substances to a minimum and for rendering harmless any such substance which is so released.
- 4.5 Provision is included for appeals to and for applications to be called in by the relevant Secretary of State.
- 4.6 It is envisaged that a risk assessment analysis will be conducted in appropriate cases in relation to individual applications (more details of this are provided later in this paper) to establish the measures necessary to control the risk of accidental pollution and in consequence the conditions subject to which consent will be granted.
- 4.7 So far as enforcement is concerned, the NRA would become aware of non-compliance with the requirements of a protection zone order, by a variety of routes, including the following:-
- (a) during site visits;
 - (b) in connection with discharge consents;
 - (c) from the catchment inventory;
 - (d) as a result of a pollution incident.

- 4.8 The approach taken by the NRA in enforcing protection zone consents would be similar to that used in relation to discharge consents issued under the Water Resources Act 1991, section 88. When the NRA becomes aware of a breach of the protection zone consent or operation of a site without a consent, where one is required, the site owner will be approached to determine the reason for non-compliance with the requirements of the Order. Continued non-compliance may result in a warning letter being issued and only if this is subsequently ignored would a prosecution normally be brought. If the site owner has financial problems with implementing protection zone requirements, then NRA staff will discuss the implementation of precautionary measures in a phased manner, if this is appropriate.
- 4.9 In addition to the power to designate water protection zones, conferred by section 93 of the Water Resources Act 1991, section 96 of that Act gives the Secretary of State power to make regulations for the purposes of any Orders made under section 93. These regulations may deal with various procedural matters relevant to applying for and obtaining the NRA's consent, when this is required by any Order made under section 93. When the Bill for the Water Act 1989 was before Parliament, a commitment was given by the Minister to the House of Commons' Standing Committee that the Government would consult publicly on any regulations intended to be made under the similar provision in that Bill which preceded section 96.
- 4.10 As no regulations have been made under section 96, or draft regulations put out for consultation, the NRA has proceeded with a comprehensive draft Order, Part III of which contains general provisions relating to applying for and obtaining the NRA's consent. These are considered to be similar in nature to the provisions that regulations under section 96 might be expected to contain.
- 4.11 Part III of the draft has also been prepared in such a way that it could instead form the basis for draft regulations under section 96, should the Government consider that the detailed provisions relevant to administering any water protection zone should be contained within general regulations rather than in any Order designating the protection zone itself. In that event, it is envisaged that draft regulations could be put out for consultation in the period between the NRA's application for the River Dee water protection zone and the determination of that application, possibly after a public local inquiry. If the case for a water protection zone for the River Dee is accepted, these regulations could then be made at the same time as the actual designating Order itself is made under section 93.

PART 5

OTHER RELEVANT CONTROLS

EXISTING CONTROLS IN RELATION TO REGULATED SITES

5.1 The following general statutory controls and powers are amongst those which apply to the sites within the Dee Catchment Area which it is proposed to regulate by the Order -

- (a) Planning Control under the Town and Country Planning Act 1990;
- (b) Hazardous Substances Control under the Planning (Hazardous Substances) Act 1990 and the Planning (Hazardous Substances) Regulations 1992;
- (c) Regulation under the Control of Industrial Major Accident Hazards Regulations 1984;
- (d) The Notification of Installations Handling Hazardous Substances Regulations 1982;
- (e) The Dangerous Substances (Notification and Marking of Sites) Regulations 1990;
- (f) The Control of Pesticides Regulations 1986;
- (g) Control of PCBs etc. under regulations made under section 140 of the Environmental Protection Act 1990;
- (h) Air Pollution Control under The Environmental Protection (Prescribed Processes and Substances) Regulations 1991;
- (i) Control of Discharges under the Water Resources Act 1991;
- (j) Anti-pollution works and operations under section 161 of the Water Resources Act 1991.

5.2 These controls enable in varying degrees control to be exercised in relation to certain pollution risks and incidents but they do not meet either individually or cumulatively the objectives of the proposed water protection zone. This is so for a number of reasons, including in particular the following:-

- (a) The different primary purpose of the planning and major accident (CIMAH) controls;
- (b) The nature of the rights exercisable under planning and CIMAH controls;
- (c) The narrow scope of the majority of the controls;
- (d) Limitations in the regulatory criteria capable of being applied;
- (e) The different roles and resources of the other regulatory authorities;
- (f) The remedial as opposed to precautionary nature of a number of the controls and powers.

5.3 In practice, areas of possible duplication of control are very few and arrangements in place, both statutory and otherwise, for consultation and liaison between the NRA, local authorities and the Health and Safety Executive will enable any inconsistencies in approach to be avoided.

CONTROL OF EXCLUDED SITES

5.4 The following additional controls apply within the Dee Catchment Area in relation to sites which it is not proposed to control through the proposed Order -

- (a) Integrated Pollution Control under the Environmental Protection Act 1990;
 - (b) Controls under the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) Regulations 1991;
 - (c) Petroleum Licensing under the Petroleum (Regulation) Acts 1928-36;
 - (d) Petroleum licensing under the Petroleum Spirit (Motor Vehicles &c.) Regulations 1929.
- 5.5 Integrated Pollution Control (IPC) applies to prescribed processes which are carried out at nine sites within the catchment. Arrangements will be made to ensure liaison with HMIP in relation to IPC within the catchment to secure as appropriate the achievement of the water protection zone objectives in relation to sites subject to IPC.

FURTHER RELEVANT POWERS

- 5.6 The designation of nitrate sensitive areas pursuant to section 94 of the Water Resources Act 1991 provides a further means of control directed at specific pollution problems arising from the use of nitrates for agricultural purposes. No such designation has occurred in relation to the Dee Catchment and section 93 does not permit water protection zones to duplicate the section 94 powers by regulating the use of nitrates for agricultural purposes.
- 5.7 Reference should also be made to the possibility of further regulations being made under section 92 of the Water Resources Act 1991 in addition to the Silage, Slurry and Agricultural Fuel Oil Regulations already referred to and made under the provision which it replaced. It is understood that regulations to set minimum standards for chemical stores and industrial fuel oil installations are being contemplated (This Common Inheritance (CM1200, 1990) paragraph 12.18) but such regulations can address only part of the problems sought to be covered by the water protection zone. It may be noted in particular that regulations under section 92 are of general application rather than applicable to particular areas. They are thus likely to be of limited use in establishing conditions relevant to the special needs of rivers used for potable water supply, for example the need to avoid pollution which affects taste or smell but does not otherwise cause material damage or offence.
- 5.8 Further regulations could also be made in addition to those respecting PCBs, PCPs, PCTs, lead carbonate and sulphate in paint, mercury, arsenic and organo-stannic compounds in industrial coaters, etc. under section 140 of the Environmental Protection Act 1990. That power is not, however, directed specifically at preventing water pollution and, whilst further regulations under it may help reduce particular pollution risks, the potential for further such regulations would not appear to provide a basis for the overall control of pollution risks within the Dee catchment area or for the adoption as necessary of protective and precautionary requirements upon the basis of risk assessment, which the NRA has identified as the practical answer to the Dee's particular problems.

PART 6

CONSULTATION

- 6.1 Discussions have been held with local Confederation of British Industry (CBI) and Chemical Industries Association (CIA) groups in the area and with individual major companies in the proposed zone. A presentation has also been made to a national CBI conference on risk assessment and to a CIA colloquium.
- 6.2 Consultation has taken place in addition with the Health and Safety Executive, HMIP, water suppliers and local authorities. The Dee Steering Committee, established as a result of the 1984 phenol incident and comprising representatives of the four water companies concerned and the NRA, has provided a particular point of reference in relation to the water companies and is fully supportive of the current application.
- 6.3 A Consultation Document, explaining the need for a water protection zone, was distributed, in early November 1993, to all industries likely to be affected and to other organisations and representatives, both locally and nationally, who might have an interest in the proposed protection zone. Formal responses to the consultation document were requested by the end of December 1993. The industries most likely to be significantly affected by the Order have also received a copy of a short video film (7 minutes) which describes the basic rationale and approach of the methodology which will be employed to implement a successful protection zone application.
- 6.4 Public meetings were held during early December 1993 in Chester, Wrexham, Mold and Llangollen (week commencing 6th December 1993).
- 6.5 All responses have been considered (with written responses to the November consultation generally being replied to individually) and modifications have been made to the draft Order where appropriate.
- 6.6 This paper has been prepared specifically to facilitate the further public consideration which will now be given to the detailed proposals for the water protection zone as set out in the Order now applied for.
- 6.7 A case study is currently being undertaken on the Kronospan site at Chirk to validate and tune the risk assessment methodology which will be used to underpin the implementation of the water protection zone, if the Order is granted.

PART 7

RISK ASSESSMENT

- 7.1 The proposed water protection zone will be controlled upon the basis of risk assessment, with consents to the keeping or storage of substances being granted, conditionally or unconditionally, having regard to the risks posed by accidental spillages.
- 7.2 Risk assessment involves the analysis of probable hazards, the likelihood of their occurrence and the consequences when they do. The technique allows a proactive approach to be taken to the prevention of pollution. Instead of reacting to pollution incidents by taking remedial action, risk assessment will allow the NRA to minimise the likelihood of incidents taking place.
- 7.3 The first stage of the risk assessment approach is the production of an inventory of relevant substances for the catchment. The Dee catchment inventory was last updated in 1992 and this process is to be repeated periodically.

PRAIRIE

- 7.4 A particular risk analysis model has been developed known as PRAIRIE. The acronym PRAIRIE stands for Pollution Risk from Accidental Influx to Rivers and Estuaries. PRAIRIE is a specialised, PC-based, expert system which facilitates the application of risk assessment techniques to the prevention of accidental pollution. It has been developed by AEA Technology Consultancy Services (SRD) co-funded by the NRA, the Department of the Environment and the Health and Safety Executive. The HSE and DoE element of the funding was primarily with regard to their responsibilities under CIMAH Regulations (Control of Industrial Major Accident Hazards).
- 7.5 PRAIRIE will be used, where appropriate, by the NRA within a risk assessment strategy which allows consideration of both the frequency and consequences of pollution incidents. The use of PRAIRIE will not be appropriate where substances are insoluble or where relevant toxicity data are unavailable. In these cases a pragmatic approach will be necessary, with consideration being given to the adequacy of precautionary measures having regard to experience of ascertainable risks.
- 7.6 For appropriate substances (i.e. those for which toxicity data are available), the proposed risk assessment strategy involves the initial use of PRAIRIE, in its simplest mode, as a screening tool. This will eliminate from further consideration any substance which cannot possibly exceed concentrations which might cause problems, even in the worst-case conditions of low flow and rapid loss of the total contents of any container, to the river. In such cases, consent can be granted without additional restrictions.
- 7.7 A typical PRAIRIE screening run will take approximately 15 minutes including data entry, the model run and printing of the results. Although the total time for all of the substances will be significant, this can be partially off-set by resource savings resulting from a reduction in the number of pollution incidents and, because of the way in which the implementation of the Order will be phased, this workload can be absorbed by the current NRA complement at its Mold Office.
- 7.8 If the outcome of the initial run gives grounds for further analysis, then a medium level assessment will be required except in those cases where the cost of doing so is likely to be disproportionate to the cost of such improvements as may be required. For such cases the NRA is developing standard guidelines compliance with which will normally obviate the need for further

assessment. The principal difference between the initial PRAIRIE run and this second stage is that the latter takes into account the frequency with which a release might occur. The assessment remains focused on significant incidents, such as catastrophic failures of vessels. However, the site occupier is also required to provide information on failure frequencies of a range of other components in order to ensure that no significant events have been ignored. Generic failure rate data are used in this sort of assessment.

- 7.9 The medium level assessment offers a second tier of screening to identify those facilities for which, although there is a potential for exceeding the desired threshold measured in terms of a 24 hr SNARL (i.e. Suggested No Adverse Response Level for humans) at the nearest drinking water abstraction point, the associated frequency of occurrence is considered acceptable. If the second PRAIRIE run indicates that arrangements for the keeping or use of a particular substance are unsatisfactory, then the following types of precautionary measures may be considered:-

- (a) improved bunding;
- (b) revised site drainage;
- (c) reduction of quantity stored;
- (d) storage in a greater number of smaller tanks;
- (e) improved site management.

The analysis can then be modified to take account of proposed precautionary measures and PRAIRIE re-run to determine whether the arrangements are then acceptable. This procedure can be repeated until acceptable precautionary measures are determined.

- 7.10 Extended risk assessment is a further stage in the process of increasing the complexity of the analysis and thereby improving its accuracy. If the predicted frequency of release is unacceptable, by the medium level assessment, after incorporation of precautionary measures, then use of the extended approach may, by providing a more accurate estimate, reduce the frequency to an acceptable level. Specifications will be provided to industry describing what is required for medium level and extended risk assessments. Criteria for determining the acceptability of relevant risks are also being developed.

PART 8

COMPLIANCE COST ASSESSMENT

PURPOSE AND EXPECTED BENEFITS OF THE MEASURE

- 8.1 The purpose and expected benefits of the measures are described in detail in Parts 2 and 3 of this paper but, in essence, are to help prevent pollution of the freshwater River Dee and thereby to -
- (a) safeguard the continuity of the public water supply dependant upon it;
 - (b) prevent public health risks and additional costs arising from the pollution of that supply;
 - (c) preserve and enhance the ecology and natural quality of the riverine environment.

BUSINESS SECTORS AFFECTED

- 8.2 All businesses located in the Dee catchment (upstream of Chester Weir), who keep or use controlled substances above the designated thresholds within a catchment control site (these terms being defined in the draft Order) will be affected. As indicated elsewhere in this paper, construction sites, petrol stations, agricultural units and sites subject to Integrated Pollution Control are excluded. Of approximately 700 companies located in the catchment upstream of Chester Weir, there are estimated to be 260 which would require protection zone consent.

ASSESSMENT OF COMPLIANCE COSTS

- 8.3 All of the cost figures provided are estimates based on interpretation of the best information available at this time (January 1994). Regard has been had in particular to the work undertaken at Monsanto Plc's Ruabon Works to reduce environmental risks. The facilities provided by Monsanto at a cost of £750,000 meet the requirements envisaged for protection zone consent and the site is the most complex within the freshwater catchment area.
- 8.4 There will also be additional costs to the NRA in administering the protection zone order. However, those costs will be partially negated by a reduction in the cost of remedial actions needed following avoidable pollution incidents. There will also be a cost to the NRA in bringing any prosecutions which might be necessary to enforce the Order, but the NRA would seek to recover these costs through the courts.

COMPLIANCE COSTS FOR A "TYPICAL BUSINESS"

Deemed Consents

- 8.5 For an existing industry which does not significantly change its activities, there will be a period of grace, under the proposed draft Order, in that deemed consents will be issued free of charge, which will not be eligible for review until 2 years have elapsed.
- 8.6 The NRA will seek to prioritise the review of consents and will start with industrial sites where there is perceived to be a significant risk. The time taken for each review will mean that the introduction of the protection zone measures will occur in a phased manner which should assist businesses to make suitable budgetary provision for any assessments and improvements needed. Reviews of deemed consents instigated by the NRA will not attract any consent application fee.

Recurring Costs

- 8.7 None, if the status quo is maintained. Once a consent had been granted it will only be eligible for review after 2 years and, unless there is a significant change in the quantity or nature of the substances stored on site, the NRA would not normally initiate a review of the protection zone consent.

Non-recurring Costs

- 8.8 Consent Fee : £0-£250. A figure of £50 would apply to sites where 10 substances or less were stored. A figure of £250 would apply to all other sites. The zero amount relates to existing sites which receive a deemed consent and do not subsequently make significant changes to the quantity or nature of the substances which they store.
- 8.9 Administrative Costs : £50 to £5,000. The administration costs to industry, in applying for protection zone consent and collating the information required by the Order, should not exceed two hours per substance. For a small industry, storing less than 10 substances, this will mean a cost to the industry of up to £500 (taking administrative costs at £25 per hour), as a one-off payment. For larger, more complex sites the overall costs will be higher but there should be some economies of scale to be made, as for example, one site plan will cover a larger number of substances. Larger industries are also more likely already to hold the relevant information in an appropriate format.
- 8.10 Quantitative Risk Assessment (QRA) if required : £5,000-£20,000. This would probably have to be undertaken by specialist consultants, but would only need to consider the substances on a site which presented a demonstrable risk to a potable water abstraction. The upper cost figure would only apply to a large industrial site. For those sites where the cost of a QRA is likely to be disproportionate to the cost of improvements, it is intended to provide standard guidelines, compliance with which should obviate the need for a QRA.
- 8.11 Precautionary Measures (if required) : £500-£1m. These measures would include improvements in storage facilities, in bunding, in the drainage system and in site management procedures, in order to minimise risks to an acceptable level. Such measures might not be needed solely to comply with the Order but also in connection with BS7750, EC eco-management and audit regulations and to comply with HSE or HMIP requirements. The upper cost figure would only apply to a large industrial site.

TOTAL : £0-£1,025,250 (at 1993 prices)

TOTAL COMPLIANCE COSTS

Recurring Costs

- 8.12 None will arise other than when new industries or processes are introduced into the protection zone area in the future.

Non-recurring Costs

- 8.13 Consent Fees : £3,300. This figure is based on a one-tenth (i.e. ten percent) calculation derived from taking the total number of sites (260) and assumes 160 sites at £50 and 100 sites at £250. Ten per cent is taken as a nominal figure to represent those sites benefiting from initial exemption which subsequently apply for modification of their deemed consent as well as new sites which can be expected to require consent from time to time. The figure of 160 is an estimate of the number of sites where less than 10 substances are stored and is an upper estimate, as many sites would operate under deemed consents and would not change the nature or quantity of substances stored so that there would be no fee. The figure of 100 sites covers the remaining sites where more than 10 substances are stored. This is also an upper estimate for the reasons given above.
- 8.14 Administrative Costs : £355,000. This figure is calculated as follows:-
160 industries storing less than 10 substances and having an administrative cost of up to £500.

75 sites where a greater number of substances are stored and therefore the costs of applying for protection zone consent might be up to £2000.

25 larger industries where the number of substances will require a greater administrative resource commitment of up to £5000 per site.

8.15 Quantitative Risk Assessments : £625,000. This figure is calculated as follows:-

160 sites at nil. This figure represents those sites storing substances in quantities which, whilst exceeding the threshold amount, could be demonstrated, by a simple screening process, not to present a risk to a drinking water abstraction. The screening process will be undertaken by the NRA.

75 sites average £5,000 = £375,000. This figure represents sites where a small number of substances present a potential risk to a drinking water abstraction and therefore the relevant storage facilities need to be subjected to a QRA.

25 sites average £10,000 = £250,000. This represents sites where a greater number of substance storage facilities would need to be subjected to a QRA because they were potentially capable, individually, of causing unacceptable contamination of a drinkable water supply.

8.16 Precautionary Measures : £3,350,000. This figure is calculated as follows:-

150 sites at £nil. This is an estimate of the number of sites where no precautionary measures are necessary either because the site is screened out initially or because the QRA shows that existing precautionary measures are adequate.

85 sites average £10,000 = £850,000. This is an estimate of the cost where a small number of substance stores need remedial measures to be implemented.

25 sites average £100,000 = £2,500,000. This figure is for sites where a larger number of storage facilities need remedial measures and/or the measures are particularly expensive, due to local circumstances.

TOTAL £4,333,300 (at 1993 prices).

EFFECTS ON INTERNATIONAL AND UK COMPETITIVENESS

8.17 The implementation of the proposed protection zone Order will have costs for both the NRA and for industry but these costs need to be balanced both against the costs of not implementing the Order and against its benefits. An estimate of the cost of providing bankside storage, which is an alternative to a protection zone, is approximately £20 million and this cost would be borne by the water ratepayer, rather than the potential polluter. Major pollution incidents are extremely expensive, both to the company responsible and to society in general. Clean-up costs can be extremely high. Litigation resulting from the 1984 incident is still continuing and fines and fishery restoration costs can be significant, even to large companies.

8.18 The effect on international competitiveness will be slight in relation to those countries which require a similar degree of protection. If a comparison is made with countries having lower standards for the protection of public health and the environment, the protection zone Order might reduce competitiveness. However, impacts on public health and the environment, which are accepted in some countries, would be unacceptable in the UK.

8.19 The measures proposed for the Dee protection zone are compatible with what is required under both the EC 'Eco-management and audit' Regulation and the related British Standard 7750. Both are voluntary schemes which require companies to establish environmental management systems

and carry out systematic, periodic internal audits. The Eco-management and audit regulation also requires a company to make available to the public independently verified environmental statements.

- 8.20 The current thrust of environmental legislation is towards proactive, preventative measures. A recent EC Directive entitled, "Commission Directive (93/67/EEC) which lays down the principles for assessment of risks to man and the environment of substances notified in accordance with Council Directive 67/548/EEC" (Dangerous Substances), will require risk assessment techniques to be employed in relation to new substances placed on the market. Council Regulation EEC No. 793/93, of 23rd March 1993, requires similar techniques to be applied to existing substances. Risks to both human health and the environment are considered. The techniques being proposed for the evaluation of risk in relation to the proposed protection zone Order have been formulated to be compatible with the requirements of this directive and regulation. Other EC countries will have to employ similar techniques, where appropriate, and this will reduce any competitive disadvantage which will be felt by companies based in the protection zone, compared to their EC competitors.
- 8.21 The NRA understands from the Loss Prevention Council, an organisation established by the British insurance industry, that, in the future, there it is likely to be a higher insurance premium for companies taking out environmental insurance and not employing environmental risk assessment techniques.
- 8.22 It may also be noted that companies with a positive reputation in relation to the environment can use this as an asset which can help to improve sales and therefore compensate for the cost of measures designed to protect the environment. A number of large retailing companies for example require proof of environmental credentials before they will stock a manufacturing company's products. In certain circumstances, the water protection zone could thus improve a company's competitive position compared to 'dirtier' companies or those who cannot demonstrate that equivalent safeguards are taken in relation to the environment.

EXTENT OF CONSULTATION

- 8.23 The extent of prior consultation upon the proposals which has taken place is set out in Part 6 of this Paper. In addition, the order-making procedure now being embarked upon which allows representations to be made and a public local inquiry to be held provides a further opportunity for businesses to make known their views and for these to be taken into account.

ARRANGEMENTS FOR MONITORING AND REVIEW

- 8.24 It is intended to monitor the actual compliance costs by annual questionnaire and by use of NRA records. The efficacy of the protection zone measures will also be open to assessment by reference to the number and significance of pollution incidents which occur following their implementation.

ALTERNATIVE APPROACHES

Other Statutory Controls

- 8.25 As indicated in Part 5 of this Paper, a number of other statutory controls are relevant to pollution control within the Dee catchment area but none meets or is capable of being made to meet the objects of the water protection zone.
- 8.26 Risk Assessment techniques could be used, to reduce the risk of accidental spills, at the consultation stages of both planning and HMIP authorisation applications. However, in the former case, this would only apply to new industries or certain new uses. In the latter case, it would only apply to industries carrying out prescribed processes and, of the 700 industries which

exist on the Dee, only nine currently (January 1994) come under IPC control.

Voluntary Code of Practice

- 8.27 The limited membership of the relevant industry associations in the catchment suggests that it would be extremely difficult to get a uniform adoption of a voluntary approach, even if the associations themselves could guarantee compliance. Neither the CBI, nor the CIA, can compel their members to take actions to effect a voluntary code of practice. The firms most likely to cause a problem will be the least likely to comply with a voluntary code. The CIA are understood to have indicated that, if measures are needed, they view the protection zone Order favourably, as it will ensure an even-handed approach.

Bankside storage

- 8.28 Bankside storage involves the construction of reservoirs of abstracted water, adjacent to the river, so that in the event of a pollution incident being detected, the river abstraction can be suspended and water from the reservoir used instead. The capacity of the bankside storage should be appropriate to ensure that the river abstraction is not needed for the duration of any feasible incident. For the River Dee a figure of 5 days' storage would be appropriate. Bankside storage would be more expensive than a protection zone. The cost of provision is estimated to be approximately £20 million and it would still require extensive monitoring for pollution detection purposes. It would put the cost with the ratepayer, rather than with the potential polluter and be directed solely at the effects rather than preventing the incidence of pollution.

Catchment Management Plans (CMP)

- 8.29 CMP's address all issues in a catchment and try to resolve conflicts to achieve appropriate improvements. The Dee CMP is currently under production and will be available later in 1994. The CMP has no statutory basis, but will be produced with consideration of the powers available to the NRA in order that any recommendations can be given the force of law, where necessary. The production of a catchment management plan is a mechanism for consulting with other interested organisations and with the general public, so that their view can be taken into consideration, when putting forward a strategy for maintaining and improving the catchment. In the Dee catchment, the conflict between the water supply use and the spillage of substances from industrial sites is a key issue. The proposed Order is complementary to the CMP and is seen as central to the achievement of objectives in relation to the protection of the drinking water supply use of the catchment.

Monitoring

- 8.30 A programme of intensive monitoring has been implemented on the River Dee, involving twice-daily sampling and automatic monitoring connected to telemetry. Samples from the twice-daily sampling are analysed at the Dee Joint Organics Laboratory, which is administered by the Dee Steering Committee. On-line monitoring includes automatic operation of a High Performance Liquid Chromatography system to give a rapid response to pollution involving chemicals such as phenol, which are amenable to this type of analysis. However, monitoring can only warn that a pollution event has already occurred. It is far more effective to prevent the incident in the first place.

APPENDIX I

WATER RESOURCES ACT 1991
SECTION 93

Water protection zones.

93.- (1) Where the Secretary of State considers, after consultation (in the case of an area wholly or partly in England) with the Minister, that subsection (2) below is satisfied in relation to any area, he may by order make provision -

- (a) designating that area as a water protection zone; and
- (b) prohibiting or restricting the carrying on in the designated area of such activities as may be specified or described in the order.

(2) For the purposes of subsection (1) above this subsection is satisfied in relation to any area if (subject to subsection (3) below) it is appropriate, with a view to preventing or controlling the entry of any poisonous, noxious or polluting matter into controlled waters, to prohibit or restrict the carrying on in that area of activities which the Secretary of State considers are likely to result in the pollution of any such waters.

(3) The reference in subsection (2) above to the entry of poisonous, noxious or polluting matter in controlled waters shall not include a reference to the entry of nitrate into controlled waters as a result of, or of anything done in connection with, the use of any land for agricultural purposes

(4) Without prejudice to the generality of the power conferred by virtue of subsection (1) above, an order under this section may -

- (a) confer power on the Authority to determine for the purposes of the order the circumstances in which the carrying on of any activities is prohibited or restricted and to determine the activities to which any such prohibition or restriction applies;
- (b) apply a prohibition or restriction in respect of any activities to cases where the activities are carried on without the consent of the Authority or in contravention of any conditions subject to which any such consent is given;
- (c) provide that a contravention of a prohibition or restriction contained in the order or of a condition of a consent given for the purposes of any such prohibition or restriction shall be an offence the maximum penalties for which shall not exceed the penalties specified in subsection (6) of section 85 above;
- (d) provide (subject to any regulations under section 96 below) for anything falling to be determined under the order by the Authority to be determined in accordance with such procedure and by reference to such matters and to the opinion of such persons as may be specified in the order;
- (e) make different provision for different cases, including different provision in relation to different persons, circumstances or localities; and
- (f) contain such supplemental, consequential and transitional provision as the Secretary of State considers appropriate.

(5) The power of the Secretary of State to make an order under this section shall be exercisable by statutory instrument subject to annulment in pursuance of a resolution of either House of Parliament; but the Secretary of State shall not make such an order except on an application made by the Authority in accordance with Schedule 11 to this Act and otherwise in accordance with that Schedule.

SCHEDULE 11

WATER PROTECTION ZONE ORDERS

Applications for orders

1.- (1) Where the Authority applies to the Secretary of State for an order under section 93 of this Act, it shall -

- (a) submit to the Secretary of State a draft of the order applied for;
- (b) publish a notice with respect to the application, at least once in each of two successive weeks, in one or more newspapers circulating in the locality proposed to be designated as a water protection zone by the order;
- (c) not later than the date on which that notice is first published serve a copy of the notice on every local authority and water undertaker whose area includes the whole or any part of that locality; and
- (d) publish a notice in the London Gazette which -
 - (i) states that the draft order has been submitted to the Secretary of State;
 - (ii) names every local authority on whom a notice is required to be served under this paragraph;
 - (iii) specifies a place where a copy of the draft order and of any relevant map or plan may be inspected; and
 - (iv) gives the name of every newspaper in which the notice required by virtue of paragraph (b) above was published and the date of an issue containing the notice.

(2) The notice required by virtue of sub-paragraph (1)(b) above to be published with respect to an application for an order shall -

- (a) state the general effect of the order applied for;
- (b) specify a place where a copy of the draft order and of any relevant map or plan may be inspected by any person free of charge at all reasonable times during the period of twenty-eight days beginning with the date of the first publication of the notice; and
- (c) state that any person may, within that period, by notice to the Secretary of State object to the making of the order.

Supply of copies of draft orders

2. Where the Authority has applied for an order under section 93 of this Act, it shall, at the request of any person and on payment by that person of such charge (if any) as the Authority may reasonably require, furnish that person with a copy of the draft order submitted to the Secretary of State under paragraph 1 above.

Modifications of proposals

3.- (1) On an application for an order under section 93 of this Act, the Secretary of State may make the order either in the terms of the draft order submitted to him or, subject to sub-paragraph

(2) below, in those terms as modified in such manner as he thinks fit, or may refuse to make an order.

(2) The Secretary of State shall not make such a modification of a draft order submitted to him as he considers is likely adversely to affect any persons unless he is satisfied that the Authority has given and published such additional notices, in such manner, as the Secretary of State may have required.

(3) Subject to sub-paragraph (2) above and to the service of notices of the proposed modification on such local authorities as appear to him to be likely to be interested in it, the modifications that may be made by the Secretary of State of any draft order include any modification of the area designated by the draft order as a water protection zone.

Consideration of objections etc.

4. Without prejudice to section 213 of this Act, where an application for an order under section 93 of this Act has been made, the Secretary of State may, if he considers it appropriate to do so, hold a local inquiry before making any order on the application.

APPENDIX II

EXPLANATORY NOTES

Citation

Article 1 provides for the citation and coming into force of the Order.

Definitions

Article 2 of the Order contains a number of important definitions. The Order requires (in article 4) that the prior consent of the NRA be obtained if a person wishes to carry on a prescribed activity within the proposed water protection zone. A 'prescribed activity' is the keeping or use of a controlled substance within a catchment control site. A 'catchment control site' is essentially a site used for one or more specified purposes (for example, for an industrial process) in which there is kept or used, or proposed to be kept or used, a controlled substance. Construction sites, vehicle filling stations, sites within agricultural units and sites used for carrying on a prescribed process within the meaning of Part I of the Environmental Protection Act 1990 are specifically excluded.

The term 'controlled substance' is also defined in article 2 and broadly speaking encompasses chemicals, fuels, lubricants, industrial spirits or solvents, medicinal products, food in liquid form, feeding stuff in liquid form, certain fertilisers, cosmetic products and substances identified by manufacturers as being toxic, harmful, corrosive or irritant. However a substance will only become a 'controlled substance' if it is present on site in a certain quantity, described in the draft Order as 'the relevant quantity'. For certain foods or feeding stuffs this will be an amount equal to or in excess of 500 litres and in every other case an amount equal to or in excess of 50 litres when the substance is present in a single container, but otherwise 200 litres. (50 litre containers have been chosen as a higher threshold for the control of some substances as it was decided that this was the size of containment where there were significant risks and hazards associated with storage and use.) **Article 2**, in the definition of 'controlled substance', also excludes certain substances (such as certain wastes and also fuels used for heat or power) from the definition.

Designation of water protection zone

Article 3 formally designates as a water protection zone, the area proposed by the NRA (which comprises, in effect, the freshwater catchment of the River Dee) which is bounded by Chester and Mold to the north, Whitchurch to the east, Chirk to the south and Bala to the west. Within this area there are 26 major industrial estates and three separate major industries.

Requirement of consent

Article 4 is the central provision of the draft Order requiring the NRA's consent for the carrying on of a prescribed activity within the proposed water protection zone. A prescribed activity is the keeping or use of a controlled substance within a catchment control site.

Deemed protection zone consent

Article 5 provides that deemed protection zone consent may be claimed where a prescribed activity has been carried on within the period of 12 months immediately preceding the date on which the NRA's notice of the formal application for the water protection zone order was first published.

A claim for deemed consent must be submitted to the NRA before the end of a period of 6 months beginning with the date on which the water protection zone Order comes into force and it must be

accompanied by certain documentary evidence and other details. Protection zone consent deemed to be granted under this article is automatically subject to the condition that the maximum aggregate quantity of the controlled substances that may be used or kept within the site at any one time shall not exceed certain limits. Other conditions are also deemed to be attached to the consent, particularly that it will be reviewable two years from the date on which the water protection zone Order comes into force.

Obtaining Consent

Article 7 provides that protection zone consent may be granted upon an application made to the NRA under the Order or, in certain circumstances, that it may be deemed to have been granted by virtue of the provisions of article 5.

Any protection zone consent that is granted will be revoked if there is change in the person in control of the land unless a prior application for continuation has been made to the NRA under **article 13**.

Applications for Consent

Article 8 contains detailed provision relating to applications for protection zone consent, setting out the information, papers or other material which should generally accompany or supplement an application for consent, such details being in relation to each controlled substance proposed to be kept or used within the site. This information will enable the NRA to carry out a preliminary risk assessment of the proposed activities.

Procedure upon receipt of applications

Article 9 sets out the procedure to be followed once an application for protection zone consent has been submitted. There is a provision whereby the NRA will be obliged to send a copy of the application to certain district councils and water undertakers in the area.

Provision is made for the applicant to ask the Secretary of State that, on grounds of the public interest or commercial confidentiality, the notification requirements of the article be disapplied in relation to a particular application.

Consideration and determination of applications

Article 10 provides for the consideration and determination of applications for protection zone consent by the NRA. The NRA may grant protection zone consent, either unconditionally or, in accordance with paragraphs (12) to (14) of the article, subject to such conditions as it thinks fit, or it may refuse protection zone consent.

Before making its decision, the NRA will be obliged formally to consult the Health and Safety Executive, certain district councils and water undertakers in the area and in certain circumstances, The Nature Conservancy Council for England (English Nature) or, in Wales, the Countryside Council for Wales.

The NRA must not determine protection zone consent until formal consultees have had a reasonable opportunity to respond. Subject to those requirements the NRA must generally decide the application within a period of 4 months from the date when it was received. This period may be extended by agreement with the applicant. If, however, the NRA proposes to give its consent to the application but one of the formal consultees has notified the NRA that it would object to this, provision is made in the article for that consultee to be notified of the proposal to give consent. Within a certain period after receiving the notification, the consultee could request the Secretary of State to call in the application pursuant to his powers under article 11. That request

for the application to be referred to the Secretary of State must be accompanied by certain details—
set out in the article.

In paragraph (9) the article sets out the particular considerations to which the NRA must have regard in considering an application for protection zone consent, which include the nature, quantity and location of any controlled substance proposed to be kept or used and the manner of its intended keeping or use, the likelihood of that substance accidentally entering, leaching or being discharged into the land to which the application relates and the likely consequences of such an accident to the aquatic environment.

Paragraphs (12) to (14) of the article set out the particular conditions that the NRA may attach to the grant of a protection zone consent and includes, in paragraph (14), the use of the BATNEEC formula (i.e. "the best available technique not entailing excessive cost") to circumscribe the exercise of the power.

Paragraph (15) of the article requires the NRA, as soon as practicable, to inform certain bodies or persons of the terms of its decision on the application.

Reference of Applications to the Secretary of State

Article 11 enables the Secretary of State to give directions requiring applications for protection zone consent to be referred to him instead of being dealt with by the NRA. Such a direction may relate either to a particular application or applications of a class specified in the direction. This power of the Secretary of State, if exercised, removes the NRA's right to determine the application in question.

Before deciding an application referred to him under this article, the Secretary of State may hold a local inquiry or hearing, or such an inquiry or hearing may be requested by the NRA or the applicant. The Secretary of State must then decide the application referred to him either by directing the NRA to refuse its consent to the application or to give its consent either unconditionally or subject to such conditions as the Secretary of State may specify.

Application for removal of conditions.

Article 12 enables an application to be made to vary the conditions subject to which an existing protection zone consent may have been granted.

Applications for the continuation of consent

Article 13 enables an application for the continuation of protection zone consent to be made before a proposed change in control of the land to which the consent relates has taken place. If an application is not made pursuant to this article then the consent will lapse upon the change of control taking place.

When the application is made the NRA may modify the consent in any way it considers appropriate or it may revoke it. If the NRA does not decide the application within four months then, in most cases it will be deemed to have been granted.

Revocation of consents and alteration and imposition of conditions

Article 14 enables the NRA by notice served on the person in control of the catchment control site to which a particular protection zone consent relates to revoke that consent, to make modifications to its conditions, or in the case of an unconditional consent, to provide that it shall thenceforth be the subject of conditions. The NRA may exercise these powers if, having regard to any material consideration, it appears expedient to do so. Certain specific powers of revocation are also granted in paragraph (2) of the article. However, these powers to revoke or modify a protection

zone consent may not generally be exercised for two years after the consent was granted or deemed to have been granted or for two years after the last revocation or modification order was made by the NRA under the article.

Appeals

Article 15 gives a right of appeal to an applicant for protection zone consent or to the person in control of a catchment control site the protection zone consent for which has been revoked or modified by the NRA under **article 14**. An applicant for consent may appeal if the application has been refused, if it has been granted subject to one or more conditions or if it has not been determined by the NRA within the specified period. The Secretary of State is empowered to determine the appeal upon the basis of written submissions unless either the appellant or the NRA ask for a local inquiry or hearing to be held or the Secretary of State otherwise considers it expedient to hold such an inquiry or hearing.

The Secretary of State may allow or dismiss the appeal or he may reverse or vary any part of the NRA's decision.

Contravention of protection zone control

Article 16 provides that any person causing or knowingly permitting a contravention of protection zone control is guilty of an offence. There is a contravention of protection zone control if a prescribed activity has been carried on within the protection zone and either there is no protection zone consent for the carrying on of that activity or that there is such a consent but the amount of controlled substances kept or used exceeds the maximum amount permitted by the consent, or if there is or has been a failure to comply with a condition subject to which a consent was granted.

The maximum penalties for offences under the Order are based upon the current maximum penalties under the main water pollution provisions of the Water Resources Act:- on summary conviction, imprisonment for a term not exceeding 3 months or a fine not exceeding £20,000 or both; and on conviction on indictment, imprisonment for a term not exceeding two years or a fine or both.

This article incorporates provisions of the Water Resources Act dealing with the criminal liabilities of directors and other third parties and provides for certain defences to any proceedings for an offence under the article.

Transitional Exemptions

Article 17 provides that no offence is committed under article 16 in relation to the carrying on of a prescribed activity if the activity qualifies for deemed consent under article 5 and if the application for that deemed consent is made within 6 months of the date on which the Order came into force.

Under **Article 18**, a 28 day period is allowed beginning with the date on which the Order comes into force within which applications for protection zone consent may be made. If an application is made during that period, no offence is then committed in carrying on the activity the subject of the application within the period beginning with the date on which the application is received and ending on its determination.

Consents Register

Article 19 obliges the NRA to keep a register available for public inspection containing certain details relating to applications for protection zone consent and the decisions made upon such applications. Other details specified in the article must also be included in the register.

Temporary exemption directions

Article 20 enables the Secretary of State in certain cases to give directions temporarily exempting the person carrying on a prescribed activity from the requirement to seek a protection zone consent.

Fees

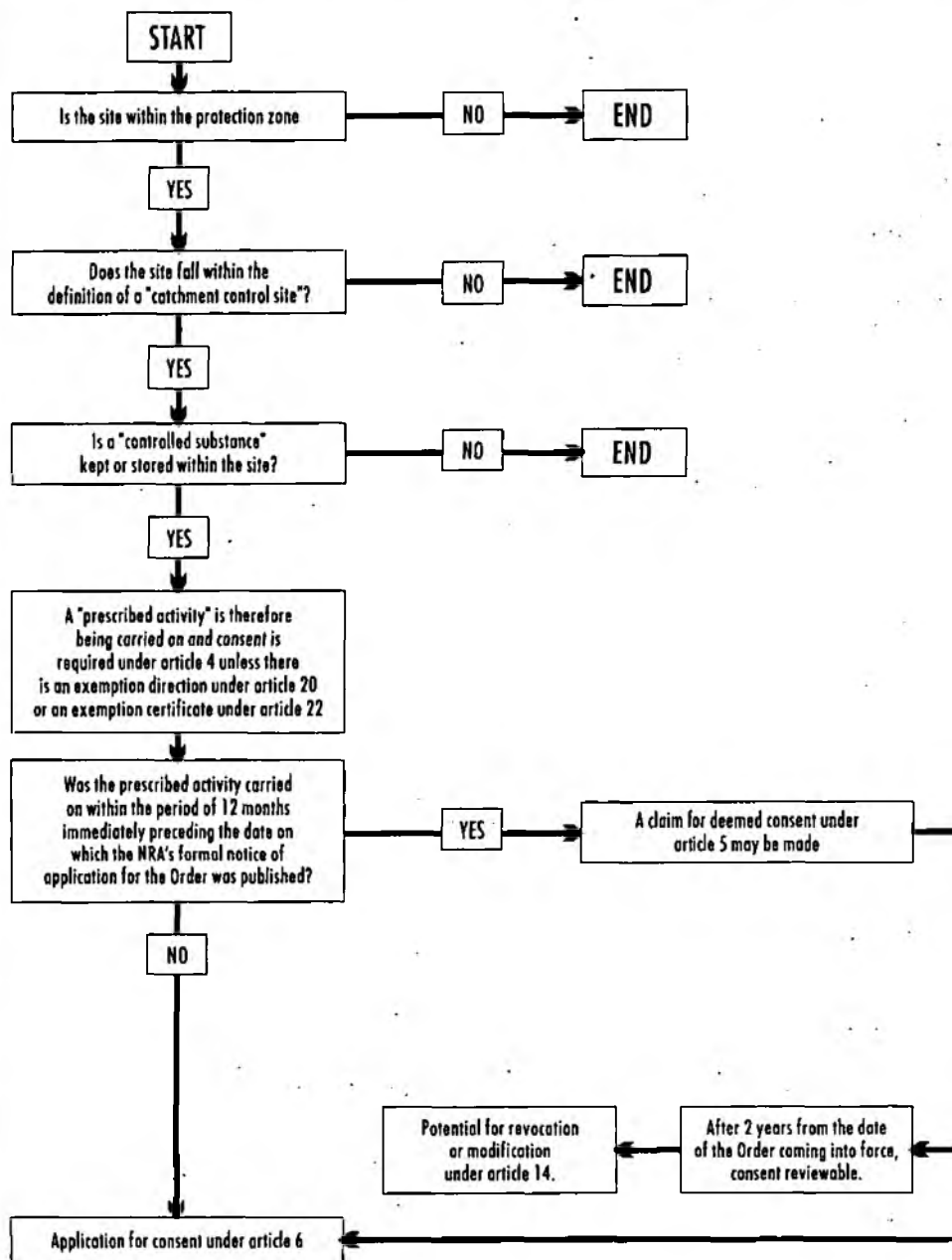
Article 21 provides that where an application is made to the NRA for protection zone consent a fee of £250 shall be payable except where the application relates to 10 or fewer controlled substances when a fee of £50 is payable. This fee must accompany the application when it is made to the NRA.

Exemption certificates

Article 22 enables the NRA to exempt any person or class of persons, activity or class of activities to which the Order applies from any requirement or prohibition imposed by the Order. Such an exemption may be granted subject to conditions and to a limited time and it may be revoked at any time. The article provides, in particular, that the NRA may not grant such an exemption unless, having regard to certain circumstances, it is satisfied that the exemption would not increase the risk of controlled substance entering, leaching or being discharged into land within the protection zone or any inland waters in the vicinity.

Local inquiries

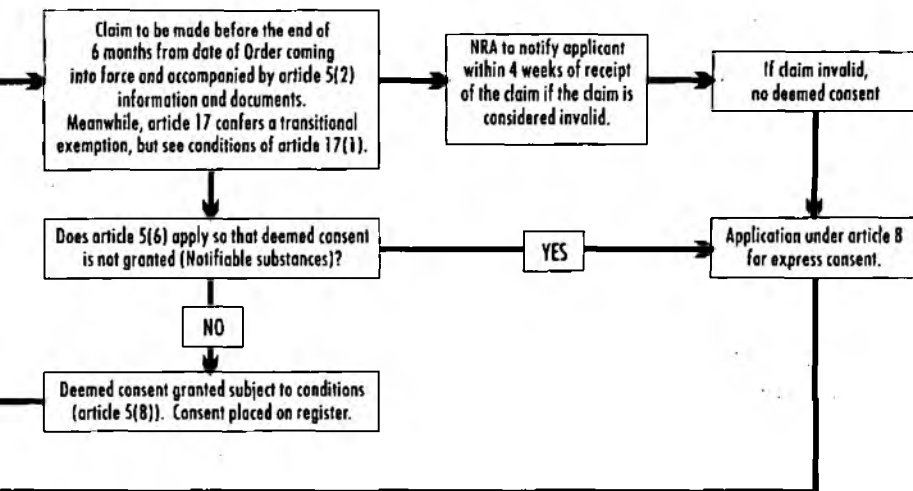
Article 23 applies section 215 of the Water Resources Act 1991 to any local inquiries held under any provisions of the Order. The provisions applied relate to the procedure to be followed at local inquiries.

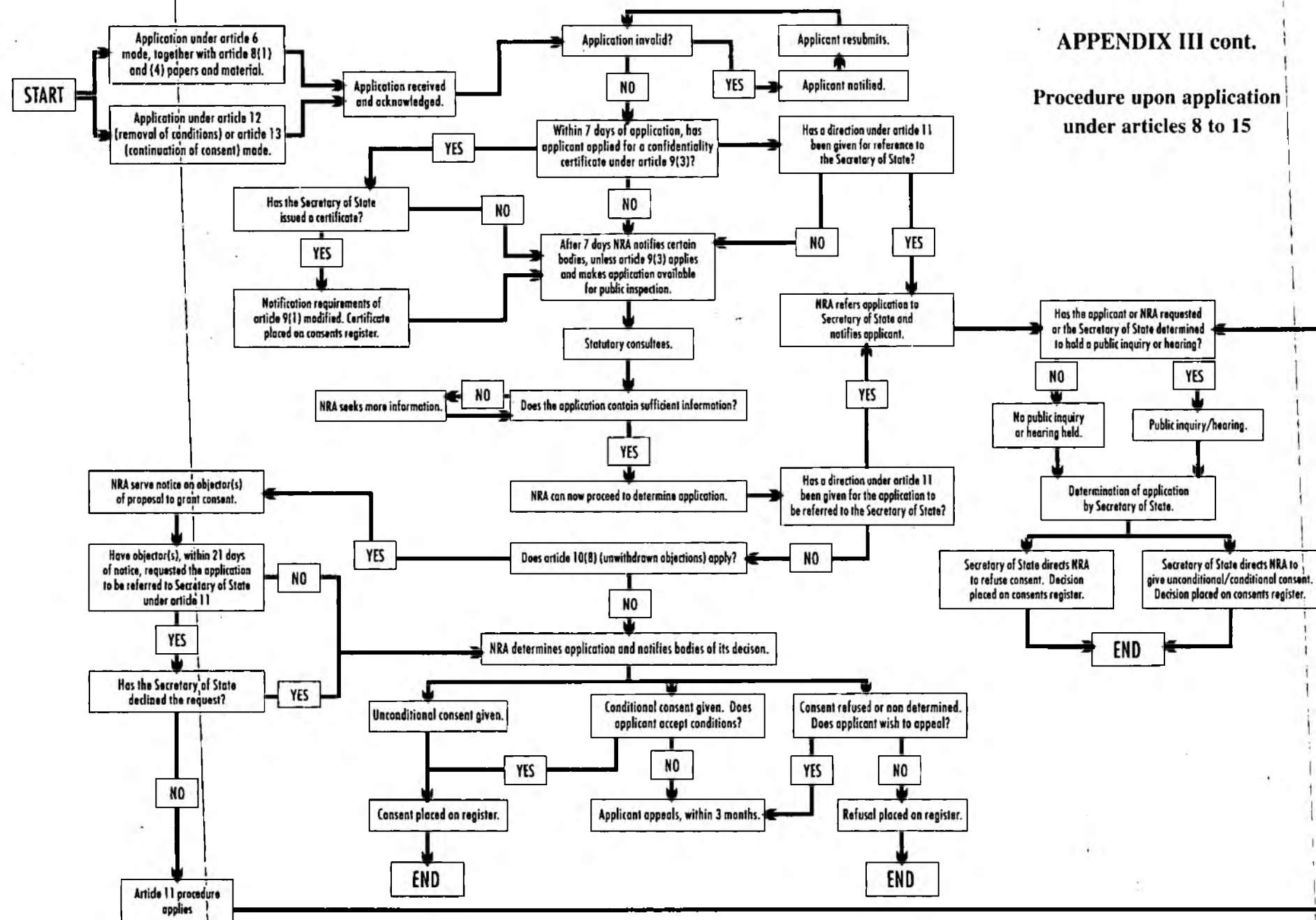


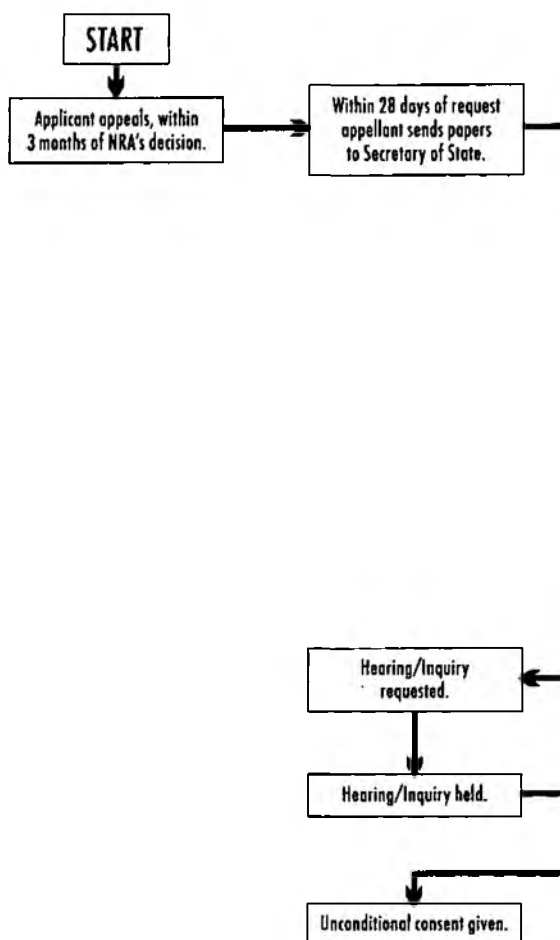
APPENDIX III

Does the order apply and does it work?

THE WATER PROTECTION ZONE (RIVER DEE CATCHMENT) DESIGNATION ORDER

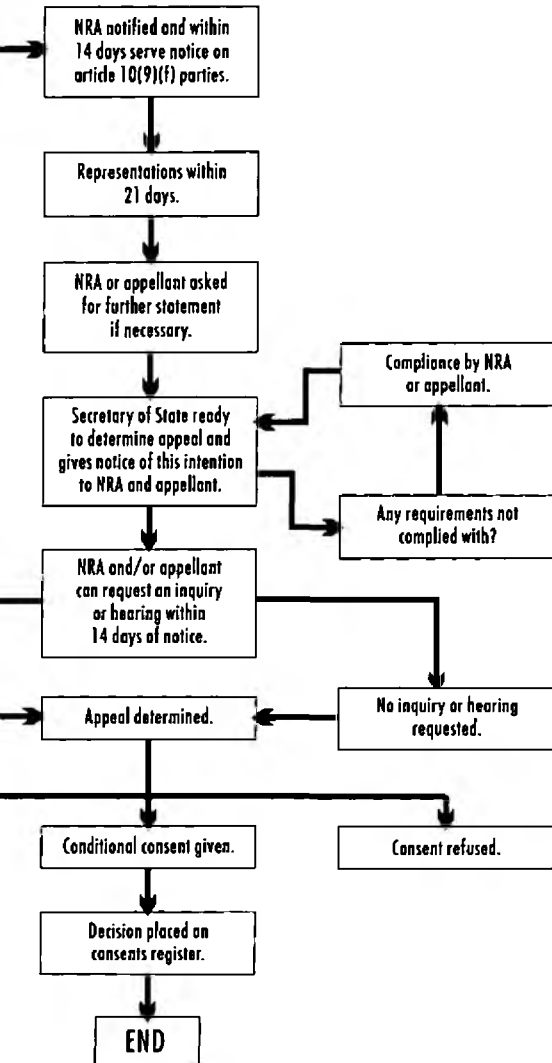






APPENDIX III cont.

Appeals procedure Article 15



**SUPPLEMENTARY PAPER IN SUPPORT OF
THE PROPOSED WATER PROTECTION ZONE
(RIVER DEE CATCHMENT)
DESIGNATION ORDER**

AAC



NRA

*National Rivers Authority
Welsh Region*