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Response to the Colne Valley Local Environment Agency Plan (LEAP)

Report produced for

FRIENDS *of the* earth
Local Groups Network

January 1998

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1. The LEAP and the Statutory Purposes of the Agency

The purposes of the Colne Valley Local Environment Agency Plan[1] (LEAP) is described by the Agency as[2]…

> "*The Agency's draft vision for the Colne Plan Area is to achieve a sustainable environment for present and future generations. The vision is one which:*
>
> - *the flows of the River Misbourne and Bulbourne will be improved;*
> - *the impacts on the environment of man's activities, such as agriculture, proposed developments, transport and recreation will be regulated to ensure a balance between man'' requirements and the need to maintain a sustainable environment; and*
> - *the generally good water quality of the surface and groundwater of the Colne Valley will be maintained and where possible enhanced*."

Although this is a laudable aim, we have to question whether or not this statement of objectives is necessarily balanced in terms of the Agency's statutory purposes – this is important since the failure to include essential statutory responsibilities would be a disregard of duty, and promoting policies beyond the Agency's statutory responsibilities would be likely to result in failure.

A key point to note about the plan is that at no point have the statutory responsibilities of the Agency been precisely outlined, and how these responsibilities might apply to the plan area. It is also very clear from reading the plan – and not unsurprising given that the plan is modelled on a river catchment – that the dominant issue in the plan is the maintenance of water quality, water resources and recreation. There is, by comparison, very little detail regarding the proposals for the regulation of contaminated land, air pollution, the handling of radioactive substances or the regulation of waste disposal.

The three questions I pose at the beginning of this report in relation to the Colne LEAP are:

1. **Are the statutory responsibilities of the Agency satisfactorily explained in the plan?**
2. **Does the plan strategically link particular issues to the Agency's legal powers, and where solutions are beyond the Agency's powers are alternative co-operative strategies identified?**
3. **Does the interpretation of issues taken in the LEAP depart from the legal responsibilities of the Agency?**
4. **Are there any issues for which the Agency has responsibility which are not properly addressed in the plan?**

By addressing each of these questions in turn it is possible to get a more 'realistic' view of the policies in the plan, and what the likely outcomes of the policy will be given the legal and financial restraints upon the Agency.

Statutory Purposes

The best general description of the purposes of the Agency is given in Part I of the

Environment Act 1995 – which set up the Agencies from the three different regulatory agencies it absorbed. Sections 4 to 10 of the Act define the role of the Agency in terms of its responsibilities for the regulation, monitoring and management of environmental pollution, and the development of water, conservation and recreational resources.

Section 4 of the Environment Act gives the government powers to define statutory guidelines to direct the work of the Agency. This section has been enacted in, "*The Environment Agency and Sustainable Development*"[3]. This document defines statutory principles governing the work of the Agency [see **Box 1** below]. It would therefore be reasonable to assume that any LEAP produced by the Agency would also take "*The Environment Agency and Sustainable Development*" as a statement of the Agency's core business, and build the rest of the plan from that basis.

Section 4(1) of the Environment Act also notes a significant distinction on the responsibilities of the Agency. It notes that in addition to the aims stated in the '95 Act, other 'enactments' are relevant. It is also important then to consider other relevant legislation such as the Environmental Protection Act 1990, the Water Resources Act 1991, the Land Drainage Act 1991, and the Radioactive Substances Act 1993.

In relation to point 1 of the queries outlined on the previous page, we believe that it is difficult to deny, on any objective reading of the plan, that there is a definite bias towards water issues in the plan – which is not surprising given the influence of the previous system of catchment management plans produced by the National Rivers Authority. But it significantly neglects many areas of the statutory objectives defined under Section 4 of the Environment Act to have this bias. It also means that future significant areas of the Agency's work, such as 'special sites' under the contaminated land aspects of the Environmental Protection Act 1990, have not been considered. More significantly, the plan fails to properly explain and examine the role of cost-benefit analysis in the work of the Agency in the Colne Valley area.

To give a direct example of the conflict between the very general nature of the plan and the statutory objectives of the Agency, section 1.2 erroneously notes that…

> "…*sustainable development has not yet been identified, however the Agency accepts the definition set down by the Brundtland Commission in 1987*."

This is not the interpretation of sustainable development taken by the Government in "*The Environment Agency and Sustainable Development*". It begins with Brundtland, but it does not accept that other issues have not been identified. It makes reference to the UK Sustainable Development Strategy[4] and other relevant documents, and then outlines the key themes of sustainable development and the considerations that need to be made in the execution of the Agency's statutory functions. [this issue is examined further in section **2.1**]

Finally, given that the Agency has statutory powers to protect the environment, it is reasonable that there be a statement outlining how the Agency propose to use those powers in the Colne Valley. In particular it would be helpful to the public and to landowners to know under what circumstances the enforcement powers of the Agency would be used.

In conclusion, it would be fair to say that there is very little consideration given to the defined statutory objectives of the Agency, how they relate to the issues presented in the Colne Valley, and what powers will be used to address the issues. "*The Environment Agency and Sustainable Development*" does not even merit a mention in the reference list for the plan.

Box 1: Statutory Objectives of the Environment Agency

Annex A, "*The Environment Agency and Sustainable Development*", November 1996, DOE, WO & MAFF)

Main Functions and Purposes of the Environment Agency

The creation of the Environment Agency provides the opportunity for more coherent and integrated environmental protection and enhancement. Although for clarity the main functions of the Agency are split between pollution control and water management the two are interrelated and many of the functions of each are relevant to the other.

This Annex summarises the main functions and purposes of the Agency and does not purport to offer a complete list. The Agency has also been given some new responsibilities such as those relating to contaminated land, the national waste strategy and the producer responsibility.

The Agency's main statutory responsibilities for regulating and managing the environment are to:

- regulate industrial processes with the greatest pollution potential so as to ensure that best available techniques not entailing excessive cost (BATNEEC) are used to prevent or minimise pollution to the environment as a whole;
- regulate the disposal of radioactive waste and (except on nuclear licensed sites) the keeping and use of radioactive material and accumulation of radioactive waste;
- regulate the treating, keeping, movement and disposal of controlled waste so as to prevent pollution of the environment or harm to human health, in a manner which is proportionate to the threat posed;
- preserve or improve the quality of rivers, estuaries and coastal waters through its powers to regulate, prevent, mitigate or remedy pollution to water;
- take any necessary action to conserve, redistribute, augment and secure proper use of water resources;
- exercise a general supervision over all matters relating to flood defence; it also has powers to take certain flood defence measures as approved by Regional Flood Defence Committees;
- maintain, improve and develop salmon, trout, freshwater and eel fisheries;
- promote the conservation and enhancement of inland and coastal waters, and their use for recreation;
- maintain or improve non-marine navigation; regulate the remediation of contaminated land designated as special sites;
- administer, in accordance with regulations on producer responsibility, registration of businesses and exemption schemes, and monitoring and enforcement of associated obligations.

The Agency will also carry out work to obtain environmental information and promote an understanding of methods for environmental protection and management. Some of this work reflects statutory responsibilities, including to:

- assemble environmental data, from its own monitoring and other sources, so that it can carry out its functions and also form an overview of the general state of environmental pollution;
- survey waste disposal needs and priorities and advise the Secretary of State on his national waste strategy;
- report on the state of contaminated land and, as necessary, produce site specific guidance to local authorities on dealing with contaminated land;
- monitor pollution of freshwater, groundwater and the sea (up to three miles from the coast);
- publish information about the demand for water and available resources;
- survey flood defences and flood risk areas;
- notify the Ministry of outbreaks of notifiable fish disease;

Box 1: Statutory Objectives of the Environment Agency (continued)

- follow developments in technology for preventing or reducing pollution;
- assess, at the request of Ministers, environmental impacts of pollution or options for avoiding, limiting or cleaning up pollution; and carry out or promote research related to its activities.

Other aspects of this category of work will be carried out under the Agency's general power to undertake work related to the carrying out of its functions. For example, the Agency will:

- monitor radioactivity in the environment which might lead to exposure of the public from non-food pathways;
- produce technical guidance on waste management.

Section 38 of the Act enables any Minister, by agreement with the Agency, to authorise it to exercise activities on his behalf. Ministers will be seeking agreements under this provision to cover a number of areas including operation of the RIMNET national radiation monitoring and nuclear emergency response system, and work on the environmental assessment of new and existing chemicals.

The Agency will, where necessary, be expected to advise the Government about the development and implementation of environmental objectives and targets. This may include technical support for Departments on international negotiations or the making of regulations.

Contribution to conservation of nature and the heritage

In fulfilling these functions the Agency is required to contribute to the conservation of nature and the heritage, as follows:

In relation to its pollution control functions

- to have regard to the desirability of conserving and enhancing natural beauty of conserving flora, fauna and geological or physiographical features of special interest when formulating or considering relevant proposals; in relation to its other functions
- to further the conservation and enhancement of natural beauty and the conservation of flora, fauna and geological or physiographical features of special interest, when formulating or considering relevant proposals and insofar as may be consistent with any relevant enactment relating to its functions.

It is also required:

- to have regard to the desirability of protecting and preserving buildings, sites and objects of archaeological, architectural, engineering or historic interest;
- to take into account any effect which proposals would have on the beauty or amenity of any rural or urban areas or on any flora, fauna, features, building, sites or objects;
- to have regard to the desirability of preserving public access to areas of natural beauty and buildings, sites and objects of archaeological, architectural, engineering or historic interest;
- to have regard to any effect which the proposals would have on the economic and social well-being of local communities in rural areas.

2. Key Issues in the Role of the Agency

This section considers in detail areas of the Agency's work, and how we believe they should relate to the Colne LEAP and the work plans of the Agency in that area. In particular it considers the second of the queries identified earlier – "*Does the plan strategically link particular issues to the Agency's legal powers, and where solutions are beyond the Agency's powers are alternative co-operative strategies identified?*"

2.1 Sustainable Development

As noted in the previous section, there is a definite mismatch between the guidance given by the Government[3] and the interpretation of *sustainable development* that has been given in the plan. Sustainability is much more that the definition given in the Brundtland Report. In fact the Brundtland Report definition is nearly always truncated, failing to give the full paragraph in the original report…

> *"Sustainable development is development that meets the needs of the present without compromising the ability of future generations to meet their own needs. It contains two key concepts:*
>
> - *the concept of needs, in particular the essential needs of the world's poor, to which over-riding priority should be given;*
> - *the idea of **limitations** imposed by the state of technology and social organisations on the environment's ability to meet present and future needs.*"

A criticism of the approach taken on sustainable development in the LEAP is that although the shortened Brundtland definition is quoted, no interpretation is given. This is important because the Brundtland quote is a '*concept*' - and like any concept it must be interpreted to be relevant to the area in which it is used. In interpreting the 'concept' of sustainable development, we have highlighted the idea of '*limitations*' because this is very relevant to the Colne LEAP. The Brundtland Report makes it clear that, although technology is able to perform many tasks, not all of the tasks, and their results, are desirable when considering the well-being of this and future generations. That has impacts on all areas of the Agency's work, from land management to the regulation of discharges.

In many ways, and particularly compared to the Government guidelines for the Agency, the consideration of sustainability issues in the plan is disappointing [see **Box 2** below]. The attitude taken in the LEAP - that there is not one concrete definition of the term which can suit all situations – prevents any meaningful consideration of sustainable development in the rest of the report. The problem of defining the concept of sustainable development has been outlined by a number of bodies, for example the Town and Country Planning Association:

> "*...it is a vague concept that, at once, offers a comprehensive, consensual and conservative approach able to weld together quite disparate and conflicting interests in environment and development. But, because it is vague and its implications poorly understood, in practice it offers few clear solutions. Anyone can sign up for sustainable development so long as it requires no specific commitment to do anything that will threaten their material interests.*"[5]

This is how we understand the issue of sustainability to be implemented in the LEAP.

Box 2: Statutory Objectives – Sustainable Development

Chapter 3, "The Environment Agency and Sustainable Development", November 1996, DOE, WO & MAFF)

Principles of sustainable development

3.1 This chapter rehearses the considerations that the Government has in mind when considering sustainable development, and restates the principles that are set out in Chapter 3 of the "*UK Sustainable Development Strategy*"[a] published in January 1994. Complementary programmes for climate change[b], biodiversity[c], and forestry[d] have elaborated on the strategy in these areas.

3.2 The most commonly used working definition of sustainable development was provided in 1987 in the Brundtland report "Our Common Future"[e]:

"*development that meets the needs of the present without compromising the ability of future generations to meet their own needs*."

Rather than predicting ever increasing environmental decay and hardship in a world of ever decreasing resources the report saw the "*possibility of a new era of economic growth, based on policies that sustain and expand the natural environmental resource base*".

3.3 Economic development is sought by societies not only to satisfy material needs, but also to provide the resources to improve the quality of life in other directions, meeting the demand for health care, education and a good environment, now and for future generations. Many forms of economic development make demands upon the environment: they use natural resources which are sometimes in limited supply, and generate by-products of pollution and waste. But there are also many ways in which the right kind of economic activity can protect or enhance the environment. One of the challenges in pursuing sustainable development is to promote ways of encouraging environmentally friendly economic activity, and of discouraging or controlling environmentally damaging activity. Sustainable development does not mean having less economic development; on the contrary, a healthy economy is better able to generate the resources to meet people's needs for a better quality of life, and new investment and environmental improvement often go hand in hand. Nor does it mean that every aspect of the present environment should be preserved at all costs. What matters is that decisions throughout society are taken with proper regard to their environmental impact.

3.4 Historically, the motivation for much early environmental legislation was concern for the protection of health. That led to measures to curb air pollution, provide clean water, and minimise risks from waste disposal. Acute health incidents as a result of pollution are now comparatively rare, and public concern centres more on issues—such as long-term exposure to low levels of pollutants - where cause and effect are harder to prove or disprove. A second concern is to conserve those common natural resources that have an economic value and which are in finite, or potentially finite, supply. Third, even where there are no market transactions involved, people value aspects of the environment—landscape, wildlife and habitats, and some of the built heritage—for their own sake and wish, so far as possible, to pass them on to later generations. In the present age, these concerns have broadened beyond people's immediate environment to global issues, such as protection of the stratospheric ozone layer and the world's climate.

3.5 Because the environment is shared, to a large extent its protection requires collective action. Decisions about economic development ought to take account of the costs of potential pollution and waste and the value of resources that are consumed and, conversely, of the value of any environmental improvements made. A key objective of environmental and sustainable development policy is to ensure that environmental costs and benefits are properly and fully taken into account in public and private sector decisions alongside the economic costs and benefits. Partly to assist in this, a number of complementary or supporting principles have been developed in recent years, and are now widely applied in domestic and international environmental policy-making.

3.6 Primarily, the Government remains committed to basing action on fact, using the best scientific information available; precipitate action on the basis of inadequate evidence is the wrong response. However, when potential damage to the environment is both uncertain and significant, it is necessary to act on the basis of the precautionary principle. This was described in the 1990 White Paper[f] in the following terms:

"*Where there are significant risks of damage to the environment, the Government will be prepared to take precautionary action to limit the use of potentially dangerous materials or the spread of potentially dangerous pollutants, even where scientific knowledge is not conclusive, if the balance of likely costs and benefits justifies it.*"

Box 2: Statutory Objectives – Sustainable Development

This interpretation of the principle is consistent with others in international usage, notably the Rio Declaration which sets out the 'precautionary approach' thus:

"Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation".

This wording is a useful reminder that the principle can be applicable to all forms of environmental damage that might arise; nor should it apply only to the actions of government.

3.7 Ecological criteria have a central role to play. This may mean considering the ability of a habitat or ecosystem to sustain a population of a particular species—sometimes described as the carrying capacity, although different meanings are ascribed to that concept. The term is sometimes extended to refer to the capacity of the environment to absorb pollution or waste. The ozone layer provides an important example; if it were to deteriorate significantly, the earth could not sustain as many species and there would be a threat to human life, as well as a loss of many fauna and flora. A specific application in the context of pollution control is the calculation of the critical load of a pollutant that an ecosystem can absorb.

3.8 The total of human wealth cannot be measured only by man-made capital but must allow also for natural environmental capital and other aspects of the quality of life. That natural capital consists both of renewable and non-renewable resources. The challenge of sustainable development is to find ways-of enhancing total wealth while using common natural resources prudently, so that renewable resources can be conserved and non-renewables used at a rate which considers the needs of future generations. In this it is especially important to consider whether there is a risk of irreversible environmental effects and, if so, how significant they may be.

3.9 Judgements have to be made about the weight to be put on these factors in particular cases. Sometimes environmental costs have to be accepted as the price of economic development, but on other occasions a site, or an ecosystem, or some other aspect of the environment, has to be regarded as so valuable that it should be protected from exploitation. Such judgements should make a proper allowance for the interests of future generations and for the pressures that society places upon the global environment.

3.10 Much environmental pollution and resource depletion occurs because the people responsible are not those who bear the consequences. If the polluter, or ultimately the consumer, is made to pay, then the costs of pollution, waste and the consumption of natural resources are brought into the calculations of the enterprise. Environmental policy in this field is therefore guided by the "Polluter pays" principle, which was adopted by Organisation for Economic Co-operation and Development countries as long ago as 1972. This principle requires that, when production processes threaten or cause damage to the environment, the cost of necessary environmental measures should be borne by the producer, and not by society at large, giving incentives to reduce the pollution. To the extent that those costs are passed on to the consumer, it can be said that the user pays and this may in turn reduce demand for the polluting activity.

3.11 Translating principles into practice is not easy. It means developing sound techniques of analysis for public decisions and standard setting and looking at environmental impacts alongside those of public expenditure, compliance costs for business, and so on. In principle, it should be possible through cost benefit analysis to place values upon any of the impacts made on the environment by economic development. In practice, it is not always possible to quantify the value of improvements or losses to the environment. Moreover, it is not always obvious what the environmental impact of a decision will be, even in physical terms. Risk assessment can help when taking decisions or planning action under conditions of uncertainty. It should begin with the best available science to identify the hazards, the potential consequences and what might be done to mitigate the consequences under alternative options. It is, of course, essential that uncertainties in the science be clearly identified and given proper weight in the assessment.

(a) Sustainable Development the UK Strategy. January 1994 Cm 2426 HMSO
(b) Climate Change: the UK Programme. January 1994 Cm 2427 HMSO. Updated by Progress Report on Carbon Dioxide Emissions, free DoE publication 95/EP/202 December 1995
(c) Biodiversity: the UK Action Plan. January 1994 Cm 2428 HMSO
(d) Sustainable Forestry: the UK Programme. January 1994 Cm 2429 HMSO
(e) Report of the 1987 World Commission on the Environment and Development. Oxford University Press 1987 ISBN 0 19 282080 X
(f) This Common Inheritance Britain's Environmental Strategy. September 1990 Cm 1200 HMSO

The full statement from the Brundtland Report, given previously, phrases 'sustainable development' in a wider social, political and economic arena. There are three concepts which require precise definition:

- **The first is development** - which is not the same as growth, although the two are often used synonymously. This factor is confused in the plan. Growth involves the physical expansion of the economic system. Sustainable growth is ultimately contradictory since there are physical limits imposed by the earth and its natural resources. Development, by contrast, implies improvement and progress and includes social and cultural as well as material dimensions. Sustainable development emphasises conservation and the recognition that natural resources are not simply free goods to be pillaged and pilfered at will. This is particularly relevant to the Agency as Government guidance considers sustainability in terms of the carrying capacity of the environment.
- **The second concept is needs** - defined in the Brundtland Report as 'meeting the basic needs of all and extending to all the opportunity to satisfy their aspirations for a better life'. The environment simply cannot cope with meeting the material standards enjoyed by the rich while, at the same time, supplying basic necessities to the burgeoning populations of the developing world.
- **Thirdly, there is the concept of future generations.** This involves the notion of stewardship. We have a moral duty to look after our planet and to hand it on in good order to future generations; this means improving already degraded areas and avoiding irreversible damage (such as the destruction of species) or imposing risks on the future (from toxic or radioactive wastes, for example).

Looked at in this way the criteria for sustainable development are very tough indeed. First, it will require a review of political and social systems - not just economic ones. Second, it implies a wholesale shift from exploitation to conservation through the accurate costing of resources which are currently considered free (the air, for example, used and polluted by power stations). Third, there has to be a withdrawal now from those activities whose effects transcend generations, and which rob or endanger future generations - the generation of radioactive waste for example. The ‘issues’ outlined for consideration in the LEAP appreciably fail to explain the foreseen problems in this context.

We believe that there are five primary goals which need to be implemented in order to achieve true sustainability. These are the goals of conservation, balanced development, environmental quality, political participation and social equity:

- **Conservation:** Sustainable development means the efficient use of non-renewable energy and mineral resources through higher productivity, recycling, development of alternative technology and substitution wherever these are possible and not environmentally harmful. It also means maintenance of biological diversity and potential. It will also require the economic valuation of natural capital assets regarded as free. The conservation goal can be said to be to ensure the environmentally efficient use of land and other resources.
- **Balanced development:** This goal is concerned with the use of physical resources and their impact on the built environment. Resource conservation requires patterns of development that minimise energy consumption, promote the re-use of buildings and prevent the waste of valuable natural resources. The goal here is to achieve an appropriate balance between the built and natural environment.

- **Environmental quality:** At the very least environmental quality means that processes must be avoided which degrade or pollute the environment. But it must also be an aim to improve and enhance environmental quality in those areas already degraded or grossly polluted. This goal is therefore to prevent or reduce processes that are harmful to the environment and human health.
- **Social equality:** A pattern of inequality has developed that intensifies the pressure on the environment from the high per capita demands of the rich and the struggle for survival of the poor. The conflicts that arise are a major obstacle to co-operation. Greater equality will not, in itself achieve sustainability since under present economic systems both wealth and poverty degrade the environment. But greater equality will remove the sources of conflict and is a precondition for political co-operation and commitment. The scale of inequality was first assessed in the Brundtland Report, and was further considered at UNCED through the proposals drawn up in Agenda 21.
- **Political participation:** Commitment will only be achieved through participation. This goal is to change values and attitudes by encouraging the increase of participation in political decision-making at all levels. Change cannot simply be ordained from above - it must also be stimulated from below. Within democratic systems of government, non-governmental organisations (NGO's) are able to promote ideas and mobilise support for them. Dispersal of power from the central state to the local level will encourage innovation, responsibility and support for policies of sustainable development. In this respect, the structure plan system fails since it is strictly regulated by 'guidance' defined at the national level.

The above goals must be acknowledged within any strategy which aims to institute sustainable development policies - purely economics or development led goals will not achieve a sustainable system - it just makes the existing economic system *'environmentally friendlier'*.

The guidance on "*The Environment Agency and Sustainable Development*" makes clear references to documents such as the UK sustainable Development Strategy[4], the UK Climate Change Programme[6], the Biodiversity Action Plan[7] and the White Paper on the Environment[8]. There are also many other policy documents which this plan could referenced as a source of guidance to the public and to local authorities. In the wider context, 'best practice' guidelines can be found in documents from the UK Roundtable on Sustainable Development, and the Royal Commission on Environmental Pollution.

As an "*emanation of government*" the Agency also has direct responsibility for progressing the relevant parts of Agenda 21, and the European 5th Environmental Action Programme. With regard to Agenda 21, the Agency has made reference to local Agenda 21. This is actually a distraction – the Agency should sort out it's policies in relation to the Agenda 21 convention signed at Rio in 1992 before it adopts other strategies which are not directly part of the Agenda 21 convention, and which are primarily intended for local authorities, not for environmental regulators.

In essence the problem we see is that the LEAP has adopted the notion of sustainable development because it is one of the current 'buzzwords'. The LEAP then goes on to infer that because the maintenance and protection of the environment and control are pollution are inherent 'sustainable' occupations the plan itself must be sustainable. That does not necessarily follow. Unless the LEAP is willing to draw up standards based on environmental capacity – as guided by the Agency's statutory purposes – then all it seeks to do is control

the worst aspects of human impact on the environment. It does not, and in practice will not, protect the environment from short and long term development trends.

Rather than claiming sustainable development as a philosophy which the Environment Agency subscribes to, the LEAP should adopt this concept as its overarching philosophy and use references and examples wherever possible to make the necessary linkage with other programmes.

The Colne LEAP should be redrafted to make sustainability the central, overarching strategy behind the principles and policies. In our opinion that means:

1. Undertaking better studies of the environment of the Colne Valley to provide better baseline data. The Agency probably has much of this data already, it's just it hasn't been reproduced in the plan. This first step is essential since all policies must be gauged from such a baseline study. (much of the evidence in the reports is a statement of fact – e.g. information on local geology. It is not a statement of the capacity of a dynamic system to absorb pollution or development)
2. Redefining the purposes of the authority in terms of the sustainability objectives outlined in "*The Environment Agency and Sustainable Development*" – that is the protection of the environment, the maintenance of human development within the carrying capacity of environmental systems, and where there is uncertainty over the effects of development the application of the precautionary principle.
3. Setting limits for the 'use and abuse' of the environment in all the sectors identified in the plan. For example, recreational use of lakes, polluting discharges, etc. These limits should all be framed in terms of the carrying capacity of the environment, identified from available data on local environmental quality.
4. Where the baseline study shows that demands are already exceeding environmental capacity – such as groundwater abstraction – then sustainable alternatives should be sought as a priority, and these alternatives should be implemented using identified statutory powers (for example revoking abstraction licenses, tightening discharge standards, etc.)
5. Where predictions show that long term damage could result form current practices – such as discharges of toxic effluent, landfilling of waste, etc – then sustainable alternatives should be outlined in the LEAP and if possible a programme identified for switching to these alternatives. If this involves consultation with another authority – such as local planning authorities – then the Agency should use its powers to the greatest extent to enforce these changes (e.g., using its powers to get unsound planning applications called in).
6. It is not enough to manage the current effects of human development. Targets should be identified, in relation to the baseline study, to improve the environment and the carrying capacity of environmental systems within the plan area. Progress towards these targets should be regularly measured and reported to the public. If progress towards a target falls behind schedule then the Agency should identify a procedure to review the LEAP to identify alternative strategies.

To bring all this down to one simple sentence – it is up to the Agency to prove that as a regulator they are able to protect the environment irrespective of the political and economic pressures for them not to do so. Past experience in this region and elsewhere in the UK do not inspire confidence that the Agency will do this in the Colne Valley

2.2 Water

The powers of the Agency to take action in respect of water comes from a wide variety of sources. The Water Resources Act governs abstraction and discharges to water, as well as the classification of statutory river quality objectives, and pollution prevention. The Land Drainage Act gives the Agency powers to undertake flood defence works. Other legislation such as the Habitat Regulations 1994 give the Agency powers to review existing consents if it is believe that they are having a damaging effect on protected species.

Unfortunately, the ability of the Agency to improve the water environment have not been precisely defined in terms of the statutory powers available to it. That might sound a rather pedantic demand, but if the strategy of the plan is not framed within the statutory powers of the Agency, the Agency will have neither the power or funding to achieve the objectives identified. Even where objectives involve authorities with other powers – for example in town and Country Planning, the Agency still have a legal position as advisor or statutory consultee which can be used to secure the goals in the LEAP.

Water Protection

In terms of the protection of water Government policy had been identified[9] as:

"*The Government's policy objective for water protection is where possible to prevent deterioration in water quality and to seek to secure improvements in accordance with agreed priorities which reflect the requirements of Community legislation. As regards groundwater, management and protection should aim to prevent pollution of water resources reflecting the requirements of Community legislation. These priorities must acknowledge that society's resources are not unlimited and that choices must be made between environmental and other objectives and between different environmental objectives. This policy objective promotes sustainable development by aiming for high standards of health and environmental protection whilst focusing measures and expenditure where action is most necessary (for example in relation to toxic, persistent and bioaccumulative substances) and the efforts are justified and cost-effective reflecting proper protection of health and safety, the environment, the water consumer and other interests such as agriculture and industry.*"

Developing policy from these general criteria is therefore a matter of identifying particular areas of the Agency's role – for example policing discharges to water – and applying a defined policy which reflects local environmental criteria. This has not been readily achieved in the plan since there is a general discussion regarding the problems of particular issues – such as sewage treatment works – but the particular sites concerned and the issues which must be resolved at each have not been identified.

Given that there is a requirement to have regard for the cost-benefit, we would have believed that the limits of what the Agency considers 'prudent' with regard to protecting water supplies should have been examined. For example, would the Agency resist development of a landfill on a major aquifer which accepted biodegradable wastes, and instead ask for some form of treatment to render the fill material as inert as possible even though this would increase the costs of disposal? This is an important issue since landfills do not cause 'massive' pollution, but they do add to the general background levels of air and water pollution in the local area. The decision the Agency have to make is therefore not as clear cut as imposing license conditions on a large industrial plant where all the cost-benefits are easy to calculate. What value does the Agency put on environmental media and the habitats within them?

This again is a matter of policy. If we look at the US Environmental Protection Agency, they are strongly in favour of identifying particular problem sites and initiating public debates regarding possible solutions (one need only view the EPAs press releases to see this). From the perspective of the public we must make it clear that issues such as this are not just a matter for the Agency or the polluter concerned. It is only by openly debating particular problem sites that the public are able to give their views as to whether particular environmental objectives are 'worth' increased costs to industry, or inconvenience to the public.

Water Resources

In relation to water resources, Government policy has been expressed[10] as:

"*Government policy reflects the objectives of sustainable development by recognising the need to reconcile the frequently competing requirements of human beings, enterprises of various kinds, natural habitats, fisheries and (in some cases) recreation and navigation. Although drinking water supply will remain of primary concern, it must be considered in the context of sustainable development. In the longer term, pressures on water resources are expected to be an increasingly significant issue in sustainable development, particularly in the South and East of England. In regulating river flow and access to surface and groundwater resources, the Agency will be expected to use its regulatory and other powers to effect this reconciliation*."

Again, the Government's policy statement particularly refers to the need to use the Agency's regulatory powers to reconcile the problems on competing water uses, but nowhere in the LEAP has a particular course of action been identified and linked to the Agency's statutory powers (issues are identified, but a linkage between an issue and the exercise of the Agency's functions is not made).

A serious issue has been identified with regard to the over abstraction of groundwater. This issue could be simply addressed if the Agency were not required to pay compensation for restricting or revoking licenses for abstraction (that is a matter for Government). However, that is not the only issue. Drought could be managed by better regulation of river flow – slowing down watercourses to flood the river valleys in Winter and top up the gravel strata. The high water content of the gravels would then buffer flows in Summer. However this would have serious implications for farming in the river valleys, particularly arable.

If river levels were the primary concern, it would also be possible to build more storage reservoirs at the heads of river catchments to supplement Summer flows – although that would be expensive and have serious land use effects. There is no simple answer to the depletion of water resources, and no one solution will solve the problem. The Agency should therefore be considering an integrated package of measure to manage the problem, ranging from measures which seek to maximise the 'storage' of water in the environment, and minimise the abstraction of water for domestic, agricultural or industrial uses. However this is not an approach that seems to be taken in the LEAP – for example issues 11/12

Flood Defence

The management of flooding is a responsibility often in conflict with the other objectives of

the Agency. Controlling flooding often means moving water away from an area faster, and hence more speedily to the sea, which is in conflict with the aim of preserving water resources. The development of flood defence schemes also has a serious impact on land and aquatic habitats.

Government policy on the flood defence responsibilities of the Agency has been defined[11] as follows:

"*The aim of Government policy on flood and coastal defence, which is consistent with sustainable development, is to reduce the risks to people and to the developed and natural environment from flooding and coastal erosion. The safeguarding of life is clearly the highest priority, but environmental and economic factors should be integral to decision-making and opportunities should be taken as appropriate to enhance the environment. Policy starts from the presumption that except where life or important natural or man-made assets are at risk, natural river or coastal processes should not be disrupted. The effects on wildlife habitats are a key consideration.*"

The assumption in all this is that development is in danger from flooding. However it is often the case that new development is sited in areas that are prone to flooding, or the level of development creates a runoff capacity problem which leads to flash flooding. Rather than try to control the problem of 'flooding' retrospectively, the Agency should seek to restrict – in their position as statutory consultee on planning matters – any development in the flood plain. Also, where large developments are proposed or where development increases incrementally, balancing ponds should be integrated as part of the development to prevent storm surges.

The attitude taken in the LEAP is very much that flooding should be managed. We would prefer flooding to be avoided. Where flooding affects existing development then the fitting of tanks in storm sewers or balancing ponds in development upstream should be considered in preference to disturbance to the watercourse itself.

2.3 Waste

A general criticism of any of the section unrelated to water is that there is a lack of detail and real policy. Waste is the first of these to be considered.

Waste is a difficult area to plan for in detail at the moment, but it can be adequately done if the current system is framed in terms of what is going to happen in the future. The Government is currently considering waste minimisation targets, as well as beginning work on the National Waste Strategy. At the same time the European commission are finalising (or at least trying to finalise) a directive on landfill which will restrict the level and composition of waste permitted at landfill sites. The agency itself continues to work on packaging reclamation schemes, as well as administrating the regulation of waste disposal under the new licensing framework that came into existence in 1994.

All these different measure in the pipeline will lead to fundamental changes in the way we handle waste and dispose of it. However, from the point of view of the LEAP it's pretty much business as usual. Waste is considered in many of the 'issues' raised in the LEAP, but there is little that is suggested as a course of action. There is also the issue regarding the licensing of landfills – which all across the major aquifers of the South East of England the Agency

continues to do even though it has been practically that the engineered containment systems do not prevent the leakage of pollutants into groundwater. Finally, even though the Agency is the body which does have precise information on the quantities of waste disposed in the region, and the availability of void space, the interpretation of data is largely that historically proposed by SEWRAC - which does not have the overriding statutory responsibilities for conservation and sustainable development which the Agency has.

We therefore question the whole basis of how the Agency has presented information on waste management in the Colne Valley area because it is heavily biased towards the status quo – and in particular the policies promoted by SEWRAC which has the vested interests of its local authority members at heart.

Government guidelines[12] to the Agency sum up in the following terms:

"*In December 1995 the Government published "Making Waste Work—a Strategy for Sustainable Waste Management in England And Wales"—setting out its policies for waste management over the next decade within the overall context of its approach to sustainable development. Ministers expect the Agency to exercise its functions so as to help achieve the aims and objectives of that strategy (and in accord with any other guidance issued to it) and thereby to contribute to sustainable development*."

This actually is not at all helpful at all. Waste controls are based around the EC Framework Directive on Waste[13], and the regulations[14] which implement them. The heart of the regulations[15] are the '*relevant objectives*' defined in the Directive which should govern the taking of any decision on waste licensing made by the Agency. In summary these objectives are:

- Ensuring that waste is recovered or disposed of without endangering human health and without processes or methods which could harm the environment.
- In relation to waste disposal:
  - Establishing an integrated and adequate network of sites to deal with waste;
  - Waste must be disposed of via the appropriate methods to ensure the highest level of protection to the environment and human health.
- In relation to plan making:
  - Encouraging the prevention or reduction of waste production and its harmfulness;
  - Encouraging the reclamation or reuse of waste.

In relation to the above objectives, the Government has set targets for the reduction of waste going to landfill, for composting and for waste recovery in the 'sustainable waste strategy' – "*Making Waste Work*". These are outlined on page 108 of the LEAP, but there has been no interpretation of the practical effect of these measures, or the consequences of failure to meet them. In fact, there is an argument that the plan-making provisions of Article 7 of the Directive apply to the LEAP, and therefore the same detailed policies that are applied to other areas of the Agency' work should be applied to waste.

It would have been helpful if in some way the effects of waste disposal could have been quantified in terms of its environmental impact – for example by calculating the quantity of greenhouse gases emitted from landfill, or the traffic generated by disposal operations, or the quantities of pollutants produced each year by the 'lifecycle' of waste arisings and disposal. There are a number of procedures that have been produced for this purpose, but no attempt to quantify the effects of waste disposal in the area has been made.

Although the LEAP is intended to plan for the future work of the Agency in this area, the waste disposal section fails badly because of the general lack of accurate information. Although the waste section outlines the production and disposal of waste in the South East using data from SEWRAC/SERPLAN, there is little detailed information on existing management systems, and future proposals, from each of the authorities in the area. In fact there is not even a figure for waste production within the LEAP area, or details of how much waste is handled by the sites identified in Map 5.4.

In summary of the above, we'd have to say that the waste management section of the LEAP is "*void due to uncertainty*".

With regards to the actual regulation issue, we would draw attention to the relevant part of the government's guidelines[16]:

"*The Environment Agency is equipped with the powers and expertise to prevent or pursue offences and to advise on the legal and sound management of waste. Ministers expect the Agency to act upon these powers and to review procedures for preventing and handling cases of fly-tipping. Disposing of waste without a waste management licence or an exemption from licensing is an offence under section 33 of the Environmental Protection Act 1990 and failure to comply with the duty of care is an offence under section 34 of the 1990 Act*."

From my experience elsewhere in the UK it has become obvious that the reason for problems emerging at many disposal sites is that the Agency (like the old Waste Regulation Departments before them) were unwilling to take action quickly to remedy public complaints. Even where there was evidence of repeated offences, there was an unwillingness to issue enforcement notices, and certainly there was an unwillingness to prosecute in all but the most excessive cases. Likewise with the regulation of licensing exemptions, exemptions were often issued after the relevant work had taken place, and often exemptions were granted without any checks as to whether the work had a valid planning permission (both these are considered an essential part of the issuing of an exemption[17]).

For this reason, rather than citing illegal waste dumping as a problem, it would be useful to have a standard guide to how the relevant powers of the Agency will be used, and what the public and the person carrying out the illegal dumping can expect in any given case.

2.4 Radioactivity

Radioactivity is another area where there is a definite lack of data. For example:

- How much radioactive material is stored in the area, and where is it disposed of?
- How many landfill sites and incinerators are licensed to dispose of radioactive wastes?
- What are the levels of contamination around sites, and what are the risks of leakage?

There is one significant site in the area – Amersham International. Although this is a nuclear site and so not solely the responsibility of the Agency, the Agency has issues two Radioactive substances Act (RSA) authorisations for the site (AF3899 & AG2847). Data is therefore directly available about the nature of the materials stored there – and at other sites in the area with RSA authorisations – but no detail is provided. The detailed information on radioactive waste arisings and storage at the site is also available through the "*UK*

Radioactive Waste Inventory 1994"[18], produced by Nirex (for example, between 1994 and 2030 Amersham will produce 4,974m^3 of solid radioactive waste).

Government guidelines[19] to the Agency state that:

"*The Government's policy aims on radioactive waste management were set out in the White Paper, 'Review of Radioactive Waste Management Policy: Final Conclusions'. This said:*

I. Radioactive waste management policy should be based on the same basic principles as apply more generally to environment policy, and in particular on that of sustainable development.

II. *More specifically, and consistent with subparagraph (i) above, radioactive wastes should be managed and disposed of in ways which protect the public, the workforce and the environment. The radiation protection principles and criteria adopted in the UK and applied by the regulatory bodies are designed to ensure that there is no unacceptable risk associated with radioactive waste management. In defining these principles and criteria and in their application by the regulators, it is recognised that a point is reached where additional costs of further reductions in risk exceed the benefits arising from the improvements in safety achieved and that the level of safety, and the resources required to achieve it, should not be inconsistent with those accepted in other spheres of human activity.*"

There is no indication in the LEAP whether or not these policy aims are being pursued by the Agency, and what success, if any, the Agency is having.

As with the waste section, there is great uncertainty regarding exactly what the policy is, and how it is being achieved.

2.5 Integrated Pollution Control

The section on integrated pollution control (IPC), prescribed processes and air pollution is again rather short, and some of the data given is fairly meaningless. For example, the figures for pollution from discharges of prescribed substances (presumably from the Chemical Release Inventory) are open to wide interpretation because of the calculations done to arrive at the final figure. Where monitoring is not constant monitoring often only gives a 'snapshot' of the actual discharge rates. Also the results are the monitored discharges, and take no account of fugitive emissions (for example, emergency pressure venting on incinerators).

With regards to the IPC processes it would also be helpful to have information on the authorisations themselves – even if it was just a reference number. For example, are any of the processes subject to upgrading programmes, and when will these programmes be complete? Also, what contribution do these discharges make to the general background pollution levels, and what justification is there for requiring better standards in order to lower concentrations of pollution in the environment?

Finally, the effect of the Integrated Pollution Prevention and Control (IPPC) Directive should have been explained more fully. For example the number of sites covered by IPPC will be much greater then IPC – for example it will cover landfill sites and the liquid/air discharges arising there. Some of the sites covered by IPPC – and again landfills feature in this – will have not been subject to such rigorous control and testing to all environmental media before.

This will obviously produce a greater 'numerical' environmental impact for the purposes of the LEAP.

2.6 Contaminated Land

At this moment, the Department of the Environment are finalising the guidelines and regulations for 'special' contaminated land sites under the Environmental Protection Act (as amended) which the Agency will be responsible for. Why then does the issue of contaminated land merit such minimal consideration in the LEAP?

The site the Agency will be responsible for are those which present a serious risk of contamination – old gasworks, landfills, and large chemical industry sites. Given that the 'special sites' are so easy to find, as compared to the plethora of other historical land uses which are more difficult to track down, why have the Agency not done at least some research work to establish where these sites are, and what risks they present (if any). Some local authorities already hold unofficial registers of contaminated sites, and there was a list of closed landfills maintained by the old Waste Regulation Authorities. Why then do we have so little detail?

The reuse of 'brown land' is a big issue at the moment because of the pressure to locate more development on green belt land. The issue of how many seriously contaminated sites there are, and what steps will be taken to remediate them, is therefore a pressing one. We need a reasoned strategy from the Agency which has, as much as possible, a consideration of problems at specific sites, and proposes methods for clean up. Where contamination has a low risk of movement into the environment, it may actually be better on the basis of risk analysis to leave the contamination where it is rather than move it to a landfill site.

2.7 Enforcement and Cost-Benefit Analysis

As noted a many points earlier, the Agency is a regulator, which means that its function is to enforce the law. However the attitude of some people within the Agency is that if the Agency has to prosecute, then they have not done their job properly. Such attitudes, in our opinion, are not in the public interest. The only way that a regulator will have the authority to police pollution of the environment – and this is demonstrated by the US and German Environmental Protection Agency's – is if they are willing and able to prosecute breaches of the law.

In practice I have often found that officers of the Agency confuse the duty to regulate with the duty not to impose unreasonable charges on industry. This is not the case. The guidance from the government is in fact quite clear[20]:

"*Section 4 of the Environment Act requires the Agency to take into account any likely costs in achieving its principal aim (set out at paragraph 2.4 above). Section 39 places the Agency under a duty, when it considers whether or how to exercise any power, to take into account the likely costs and benefits of its action or inaction. Costs are defined in section 56(1) as including costs to any person (which also means organisations) and to the environment. This duty:*

- *does not apply if it would be unreasonable in the circumstances of a particular case. Or there might be cases where it would be unreasonable for the duty to apply to the full extent. For example, it might not be reasonable for the duty to apply in full in an emergency.*
- *does not affect the Agency's mandatory obligations to discharge specific duties, comply with requirements or pursue objectives. Legal requirements (such as the implementation of water quality objectives) remain unaffected by the duty; they must still be observed. But the general duty with regard to costs and benefits will apply whenever there is more than one way of achieving the legal requirements, and if the Agency retains discretion as to how they should be achieved.*"

To avoid confusion, to ensure that polluters are forewarned of the consequences of their action, and perhaps more importantly to ensure that the public has confidence in the Agency, part of the LEAP should include details of where and when the Agency will take action to remedy breaches of the relevant legislation. Also where the conditions of authorisations are breached, there should be a clear and public procedure for ensuring that in future authorisations are complied with.

While on the subject of enforcement, it has been clearly demonstrated with the "*Community Right to Know*" legislation in the USA that the most effective form of policing of polluters is the release of information to the public. At no point in the LEAP are the information collection and dissemination provisions of the Agency discussed.

There should be, in every section, not just information on what the Agency considers to be "the facts" – there should be guidance on where the public can go to obtain more information, their rights of access, and what are the relevant standards (for example government guidelines, regulations, process guidance, etc.) which have to be complied with in each case. In this way you enable the public to take action on the Agency's behalf, lobbying polluters and national/local government for improvements in environmental standards.

2.8 Pollution Prevention

A significant area of work in the future will be the prevention of pollution at source. The Agency already has some powers to do this (Parts III and VII of the Water resources Act). This role will be taken further when guidelines are finally drawn up in relation to the implementation of the IPPC Directive. However, apart from some references to public action to prevent pollution, and mixing of foul and storm sewer effluent, there seems to be detail on the role of the Agency in the prevention of pollution.

Pollution prevention is likely to become the most important role for the Agency in future. The 'gross' pollution of the industrial revolution has been very much cured in the UK follow 60 years of regulation of discharges from the Public Health and Clean Air Acts onwards. However the issue we face today is 'diffuse' pollution from many sources such as roads, industry and urban runoff. This diffuse pollution can directly cause damage, but in the long term many of these substances are bioaccumulative and will cause damage to important habitats and humans.

Pollution prevention should therefore be regarded as a priority issue, and it should be planned for accordingly in the LEAP.

3. General Review of the Colne Valley LEAP

Thus far the analysis of the LEAP has concentrated mainly on the 'general' issues which the Agency addresses as part of its statutory duties. The focus now changes to the actual content of the LEAP itself (the selected 'issues' in the LEAP are dealt with in the following section.

General

Given that LEAPs are non-statutory, we have to ask what is the purpose of this plan. This is important because if the view of the public and the view of the Agency differ then communications will be somewhat distorted.

In essence we see the LEAP as a vehicle to express the policies of the Environment Agency within the area of the catchment. The content of the LEAP should therefore relate as much to the statutory functions of the Agency as the policies it promotes. The LEAP should also include as much data of possible on the actual sources and types of pollution, as well as information on trends in the general quality of the environment. It is important that the public know where sources of pollution are, what statutory controls exist to control this pollution, and where they can go to get more detailed information, so that they can apply pressure for change as well as the Agency.

While the LEAP does fairly comprehensively outline the general state of the environment in the area, it does not provide the sort of 'quality' data, and interpretation of the legal frameworks, for them to take on responsibility for "their own backyard". In fact in reading the LEAP one could imaging that all power lay in the Agency, and that it was entirely up to the Agency whether or not to act. This is certainly not the case, and this fact must be acknowledged in the LEAP by reference to the wider regulatory framework, with the roles of the key players involved clearly defined.

Finally, there is the matter of the level of information presented in the LEAP. It may be convenient for the Agency to just include policy, but the public need to know more than that. Rather than just a policy statement, it would be helpful if the LEAP could act a as a reference manual for the catchment. For example, it could give more detailed information of polluting sites, such as the reference numbers for IPC processes, effluent discharges, water abstractions, etc. It could also include much more information regarding past pollution incidents, and the location of major sources of pollution such as storm sewers and industrial discharges. In this way the public know where to look for pollution and can act as a more effective observation system for the Agency.

Chapter 2

There is a problem with the boundary of the plan area – the Colne catchment. Although the NRAs datasets were based on catchments, the old HMIP and Waste Regulation datasets were not. There is a problem with the availability, reliability and accuracy of data in the plan, particularly with information on waste. It would be helpful if this could be addressed, and if targets were set in the plan for harmonisation of the available data with local authorities and conservation bodies, as well as the other bodies who now make up the Environment Agency.

Much of the indicators that are included in the plan – area, length of waterways, roads, etc – are of interest, but they are fairly meaningless as a baseline for long term monitoring of the progress of the plan. It would be much more helpful to have information on effluent discharges, levels of soil erosion, and more biological monitoring of the river corridors. For the purposes of the public and developers, it would also be useful to have more detailed on the extent of floodplains, and soil vulnerability maps (map 2.6 is no where near the level of detail needed for planning purposes).

In relation to protected habitats (2.6), it is clear that not all of these are relevant to the water environment (for example, geological SSSI, or heaths/woodlands). It would be helpful therefore to know which habitats had a direct critical relationship with the water environment (which are the most sensitive to sudden changes in environmental conditions) and those which did not.

With regards to the population of each area (2.8), it would be helpful if this could be expressed also in terms of availability of recreation facilities, public open space, etc., because the need for recreation facilities and use of the countryside would be more pressing in these area.

As noted earlier, when considering the other statutory and non-statutory bodies (p.37) who the Agency works with to protect the environment, it would be useful to the general public to have a more detailed explanation of their roles and powers.

Chapter 4

Section 4.1 of the LEAP outlines the "*Agency's Responsibilities*". It notes section 4 of the environment Act 1995, but the italicised quote below it does not come from section 4 of the Environment Act – it comes from paragraph 10(vi) of the introduction to "*The Environment Agency and Sustainable Development*".

As noted at many points earlier, we perceived there to be a general problem with the definition of the functions of the Agency in terms of their statutory purposes and regulatory powers. Instead phrases are used which sound "good and green", but they have very little meaning in practice, and do not commit the Agency to take any action in particular.

The text then goes on to direct the reader to Appendix A of the LEAP, but even there the basis of the Agency's powers is cited as the Environment Act. There is no reference to other legislation which guides the work of the Agency, and which, as noted in section 4(1), bears equal weight to the law given in the Environment Act. Table 4.1.1 could have another column added which lists the relevant legislation, but there has been no attempt to explain the functions of the Agency as parts of their statutory purposes.

There is also an anomaly in Table 4.1.1 regarding the Agency not being responsible for 'clay lined water bodies'. Clay lining is not actually relevant – the issue is in fact whether the water body in question can be described as a 'controlled water'. The meaning of 'controlled waters' is defined in section 104 of the Water Resources Act 1991 (WRA). For the purposes of this matter, any free draining clay lined water body (i.e., connected by a ditch to watercourse to a nearby main watercourse) is a controlled water for the purposes of the WRA. Furthermore even those which are not connected can by ministerial direction be classed as controlled waters under secondary legislation (currently the Controlled Water (Lakes and Pond) Order

1989) – this mainly relates to land-locked lakes and reservoirs used for potable water supplies.

Additionally, Table 4.1.1 and section 4.3 note that the Agency is responsible for assisting with Agenda 21. However it does not note that as an emanation of government it is directly responsible for international and European measures on sustainable development, and nor does it mention the specific responsibilities applied to the Agency in "*The Environment Agency and Sustainable Development*". We are also concerned that section 4.3 quotes the 'Thames 21' strategy when there are more important guidelines given in "*The Environment Agency and Sustainable Development*".

Chapter 5

Section 5.1 deals with land use. Although it is useful to be given the figures for different land uses in the area, it would be useful to also have figures or the changes in land use over the previous 10 or 20 years, and the variation in this change across each sub-catchment. In this way the results of land use change could be projected, and the future effects predicted.

The plan references the Hertfordshire Structure Plan Review – which has still not been finalised as an adopted plan – but it does not note the changes brought about by other plans. For example the recent work by the London Planning Advisory Committee on site regeneration and siting new development more intensively (though welcome) brings about new issues such as sewage disposal from more densely packed populations, and the increase in surfaced areas which could lead to more run off.

With regard the draft land use guidance, it would be interesting to know how this new information fits within the current framework of Planning Policy Guidance notes and Departmental Circulars Since this new guidance is non-statutory, it would be interesting to know what weight the DoE attaches to it.

The section on agriculture should investigate the issue of soil erosion more thoroughly. Apart from the obvious implication for farming, the erosion of soil has a very damaging effect on watercourses. Not only does the slit produced blanket river bottoms and vegetation killing many of the invertebrate life, it also releases large quantities of nitrate, phosphate and pesticide in to the river environment which is bound up with the clay particles. The Royal Commission on Environmental Pollution[22] identified soil loss as a serious issue. The LEAP should seek to implement some of their policy recommendations[23].

Roads runoff

Regarding transport and infrastructure, we believe that there should be greater attention given to the runoff from major roads. Quite apart from the problems of salt runoff during the Winter months, there is the issue of hydrocarbon, volatile organic compound (VOC) and heavy metals runoff which is leading to the accumulation of toxic substances in the slits of watercourses.

Work on the effects of runoff from the M25 and the A34 has been underway for some time. The results of these studies show that pollutant concentrations in sediment are raised by runoff from roads, and that the level of pollutant is comparable to the traffic flow on that road.

The results over the page are for the River Kennet upstream of Newbury (Berkshire), and for a stormwater discharge from the M25 at Oxted (Surrey). For comparison the UK ICRCL 'threshold and the Dutch 'B' standards – both these standards represent the contamination levels at which some form of investigation should take place with a view to assessing the risk to the environment.

Box 3: Contamination in river Sediments from Roads/Urban Runoff

Heavy Metal Concentrations in River Sediments, mg/kg

	Lead	Cadmium	Copper	Zinc
River Kennet	15.1 – 98.4 (15.1)	0.27 – 77.4 (0.27)	11.2 – 189.0 (12.3)	42.0 – 454.0 (47.5)
M25, Oxted	(180)	(15)	(60)	(280)
ICRCL Threshold	500	3	130	300
Dutch 'B' value	150	5	100	500

Figures in brackets are the median for all results

Given the significance of the effect of runoff from major road – quite apart from the effects of urban runoff where foul sewers can also discharge to watercourses, we believe that the Agency should investigate this whole matter further to assess the environmental impact.

Although the discharge from roads is not illegal (they are exempt from the Water Resources Act, but a claim of damage and nuisance can be brought by owners of the adjacent land or those with a claim to fishing rights) they do represent a significant source of pollution. Work is currently underway between the Highways Agency and the University of Surrey to look at new designs of reedbed balancing pond which, it is hoped, will remove as much of the pollution as possible. These measures should be introduce elsewhere on all new road schemes, and retrofitted to other roads wherever possible.

Waste

As noted earlier, the sections no waste need significant revision in order to provide more qualitative information about waste in the catchment, and waste disposal sites.

In particular there needs to be an acceptance by the Agency that 'engineered containment' does not prevent the leakage of leachate from a landfill site. This has even been accepted to the extent that Appendix H of Waste Management Paper 26B[24] even gives methods for calculating the seepage from lined sites. In order that water resources be protected landfills should not therefore be sited near to rivers, or on major aquifers, or there the local soils/geology is vulnerable.

Significant attention needs to be given to the future trends in waste arisings in the area, and the effects this will have in terms of need for land, transport and emission to the environment.

Finally, there needs to be a reasoned policy for the enforcement of waste law in the area, in particular the enforcement of the conditions on waste management licenses, the granting and

enforcement of licensing exemptions, and the regulation of waste carriers and transfer documentation to make the mass illegal dumping of waste more difficult.

Industrial Emissions and Radioactive Materials

As with waste issue, more work needs to be done on the quality of information in this section, and the policies for enforcing the law.

Although attention was drawn to trade waste discharges in relation to prescribed processes, the issue of trade waste in general was ignored. Apart from prescribed process – the discharge of which is governed by thresholds – there is an issue regarding the cumulative effect of many trade waste discharges flowing to one sewage treatment plant. This has impacts not only for water quality, but indirectly through the quality of soils since many of the low-solubility compounds are removed in the sludge which may then be spread on land.

There is scope for the Agency and sewage companies to initiate a joint review of trade effluent discharges (which in any case is long overdue) to look at the particular pollutant loadings on individual treatment plants. It may also be useful to review monitoring procedures for the larger discharges to sewer since there have always been doubts about the accuracy and effectiveness of monitoring.

Chapter 6

As noted earlier, it is a matter of opinion whether the LEAP should represent a summary or reference text for environmental quality. It would be useful to have more historical data on the area identified in order that trends could be better understood.

Much of the emphasis regarding water quality is based on chemical parameters – in many cases these are little more than a snapshot on the quality of water at one time, and may miss irregular deterioration in quality due to pollution effects. Instead more emphasis should be given to biological indicators, using systems like those produced by the Biological Monitoring Working Party, in order to give a longer term based measure of river health rather than quality.

Environmental Indicators

It is unfortunate that an Agency whose main task is to promote environmental protection and sustainable development should give so little thought to the issue of environmental indicators. Most well written development plans set more environmental indicators than the LEAP report.

There are many sources of information on the setting of environmental indicators. In 1996 the Government produce a guide[25] which explored the issue of the purpose and relevance on environmental indicators in monitoring progress towards sustainable development goals.

4. Issues Raised in the Report

A wide range of issue have been raised in the report. In the reply card provided for the public there are boxes to prioritise issues. We do not believe that prioritisation is necessarily a relevant approach to environmental protection since it gives effective public consent to certain types of pollution or environmental damage (i.e., the inverse of the popularity index is effectively a prioritised polluters charter).

These comments should be read in conjunction with all the other points noted above.

The comments on each of the issues raised is as follows:

4.1 Landfill Impacts on Groundwater Quality

It would appear from the text that this issue is aimed primarily at the older 'dilute and disperse' landfill sites. However, we see no difference between older dilute and disperse sites and modern engineered sites. Engineered sites still leak, although they take much longer, and evidence from the USA clearly shows that in the long term there are problems maintaining both the integrity of the liner, the leachate collection system, and because waste are kept dry the final stabilisation period is extended over many hundreds of years.

Rather than just concentrate on old landfills, this policy should be aimed at all landfill sites, and we should seek to address the problem not by engineering but by:

- reducing the level of waste going to landfill;
- ensuring that waste going to landfill are stable and will not leach contaminants;
- not placing landfill sites near to watercourses, on aquifers, or on highly vulnerable soils/geology.

There is very little that can be done to manage the leakage from existing dilute and disperse landfills, short of excavating the waste, processing to stabilise the material and then redepositing it (this of course is prohibitively expensive). Instead we should seek to minimise the extent of pollution by three practical measures:

- Where possible sites should be surveyed to examine the possibility of sinking low permeability walls around the site. This is only really practical on shallow sites with in impermeable strata beneath. However it will delay the movement of pollution laterally while other measures are employed to remediate the contamination moving off-site.
- Measures should be taken to modify groundwater movement in order to prevent the movement of pollution off site. This is essentially a matter of closing down all water abstraction to prevent the site coming near to and 'depressions' in the water table that speed up groundwater movement. If the water table is not perched then it will also be necessary to pump water up-gradient of the site to try and prevent movement further – although this have many practical difficulties. Alternately water could be pumped and treated around the periphery of the site to remediate the contamination levels off site. This is already being done at two chemical dumps at Harwell Laboratory, but it is very expensive.
- If there are not practical or affordable technical options for remediation, and sensitive water supplies or habitats will not be adversely affected by pollution, then we will have to write off water resources in that area and let natural attenuation disperse the pollutants.

There is very little data on groundwater quality in any case. Just sinking boreholes around older sites to gain representative water samples will be expensive. Rather than relying on grant funding from DETR, we should look to local authorities and water companies as they are the bodies which will be most affected by any resulting pollution. In many cases the sites belong to local authorities, or the waste inside was deposited by local authorities over the past fifty years so they should bear some responsibility.

With regards redeveloping old landfill site – landfills should not be developed. Apart from obvious stability problems that often mean excavating into the waste mass, there are issues such as contamination and landfill gas to consider.

With regard to the costs and benefits, as noted earlier it may not be environmentally feasible, even if large sums of money available to pay for the work, as cleaning up a site will simply transfer pollution from one environmental media to another. For example granular activated carbon could be used to clear up pollutants in groundwater, but the disposal of carbon or its regeneration will produce more pollution.

4.2 Infiltration of Sewage in the Surface Water System

In practical terms, the segregation of stormwater and foul sewers is only going to be achieved during the wholesale renewal of old sewers – which is currently underway. However there are two options which could produced greater results:

- Firstly, lobby the government to remove the exemption for stormwater overflows from licensing. In this way they would come under the control of the Agency and the standards for water quality as well as the maintenance of screens and oil interceptors could be brought to higher standards.
- Secondly, require that where sewers are being renewed, or where storm water alleviation schemes are being developed, that appropriate steps are taken to identify/trace all inputs to that system and segregate them appropriately as part of the redevelopment scheme.

Where there is an immediate and pressing problem of storm water sewers emitting pollutants although the Agency cannot take action they might like to assist Anglers or those who own/control water right to bring a nuisance case against those concerned – in all likelihood the local authority or the sewage company. In that way there would be an economic incentive for those concerned to step up maintenance programmes.

4.3 Diffuse Pollution Sources Impacting on Groundwater

This again is a management measure. There are four main sources of diffuse pollution:

- Agriculture – in the form of runoff and seepage of organic matter, and the leaching of nutrients/pesticides from soils.
- Urban areas – main in the form of road and stormwater discharges.
- Landfill – as noted earlier.
- Soakaways from industrial processes, and the land spreading of industrial/sewage sludge.

Soakaways from domestic properties can also prevent problems in the immediate area, but they are insignificant in relation to other sources.

The issue here is one of management. If the quality of material sent to soakaways and which was spread on the land was better enforced then that would control the risk from that source. Likewise if the screens and interceptors on road and stormwater discharges had proper maintenance programmes then that would reduce overtopping and flooding and consequently reduce the pollution load entering watercourses. If urban and road discharges were also filtered using reed beds then that would also produce a qualitative different in the quality of effluent, although the maintenance cost would be higher. Finally, if more effort could be put in making agricultural premises meet the criteria in the codes of Good Agricultural Practice then many problems would be eliminated.

The role of the Agency as regulator cannot be ignored either. Where unauthorised or excessive discharges are found, or where waste materials are not manage according to consents or waste exemptions, then the power to prosecute must be used as often as possible. It is only then that the financial and 'public opinion' incentives will cause change in attitudes and practices.

4.4 Low Flow and Sewage Treatment Effluent Discharges

Introducing measures to oxygenate rivers once they are polluted is not a sufficient response to the problem.

As noted earlier regarding cost-benefit analysis, the need to consider the costs to industry cannot prevent the Agency from fulfilling its core role of enforcing the law. Where discharge standards are regularly breached then the Agency should take steps to prosecute each breach.

Where there are regular breaches, or where storm overflows are regularly used at treatment works because of a lack of capacity, then the Agency should publicise the facts and allow public opinion to assist in encouraging the polluter to undertake the appropriate maintenance or upgrading.

As noted earlier, when considering the costs to industry of upgrading existing consents, the public must be involved in the debate. If you ask the public if they object to paying a few pounds per year for sewage disposal in order to prevent raw or poorly treat sewage effluent entering local watercourses, I do not think they will disagree with the idea. But to get that support the Agency must first openly seek it

4.5 Minimising Solid Waste Production

This is a difficult subject. Waste will be minimised only when there are strict design criteria for manufactured goods to require recyclability, and when the systems exist to collect and recycling material. Also, in terms of waste arisings, concentrating solely on domestic waste will reap little benefit. Domestic waste represents 5 – 8% of the controlled waste arising in the

UK. Reducing domestic waste by 25% will only decrease waste overall by a little over 1%.

If a real impact is to be made on waste then the following steps should be taken:

- The current bias towards consumer waste should be countered as it is not the most productive method of minimising waste going to landfill. Also, through local authority schemes such as segregated collection it can be more easily tackled by other bodies;
- Greater emphasis should be put on construction/demolition wastes and sewage sludge. Both these waste streams are voluminous, and utilising construction waste as an alternative to primary aggregates, and the anaerobic digestion of sludge to provide gas and to reduce its leachability and volume by up to 50% will have greater impacts on landfill space;
- In terms of commercial, household and industrial wastes, while emphasis could be put on recycling, reuse is a more sound alternative for at least 20% of the waste stream (mainly packaging and 'throwaway' items);
- The priority for industrial waste streams, and in part commercial and domestic streams, is the reduction in the toxic content. This means tackling things like batteries and spent chemicals. Although such programme will produce very little change in the overall volume of material going to landfill, it is only a small percentage of the waste that carries a large percentage of the toxic load.

4.6 Need to Find Alternatives to Landfill

The Agency need to take responsibility for their role under the Framework directive in Waste. If this had been properly implemented regarding protection of human health and the environment, and plan making, we wouldn't be in such a bad state as we are now.

The landfill tax is a good deterrent in principle – but it's at a laughable level. In Belgium landfill tax is over £60/tonne[26]. It should fairly relate to the value of the materials being thrown away in terms of the virgin resources used to make them (i.e., a resource tax) and the non-renewable energy expended in manufacture (i.e., a carbon tax). The 'landfill' tax should also be extended to incineration.

There are only three sensible alternatives to landfill:

- Minimise waste (see above);
- Recycle or reuse as much as possible prior to disposal;
- Select disposal options which render waste more 'stable' such as composting and digestion. This does not mean incineration since the ash produced is highly leachable, and a lot of unincinerated waste still ends up in landfill.

4.7 Public Concern over Incineration

This is a curious issue to select. Why are the Agency concerned about the public's view over incineration? Why not the public's view on recycling, or prosecuting environmental polluters?

Incinerators are not preferable to landfilling in the short term. Incinerators permanently

destroy resources – at least segregated landfilling gives the option of 'landfill mining' at a later date. Also, in terms of impact, the effects of an incinerator are much greater because gaseous pollutants are more mobile, and the ash contains highly soluble pollutants.

The assumption that incinerators reduce volume by 60-75% is incorrect. If this were waste going to the incinerator this would be correct, but when we consider 'diverted' wastes and those waste not suitable for incineration (e.g., construction waste) volume reduction of the equivalent waste stream going to landfill is less than 50% (a figure which could be easily reached by resource conservation methods).

There is no pressing need to incinerate clinical waste either – microwave autoclaving or oxidation with peroxides is equally effective at eliminating the pathogens in the waste.

In terms of resource conservation and sustainability, there is no justification for adopting incineration as a waste management technique.

4.8 Extent of Contaminated Land

Firstly, to put this issue into perspective, the Agency is responsible for 'special sites' only – this is a much less onerous task in terms of detection that that facing local authorities who must identify even the minor contaminative uses.

The process of identifying contaminated land is a very simple one. In fact given access to the County archives it is possible to produce a list of site equivalent to 60-70% of historical contaminative usages within an area in one to two days. However, once a list of sites has been drawn up and rough boundaries established, actually characterising the risk from each site is much more difficult.

Just because a site is contaminated, it does not mean that it should necessarily be decontaminated. If it can be demonstrated that the pollutants in the site have very low mobility then on a risk analysis leaving the contamination in place is far preferable to digging it out and depositing in a landfill site. However this does not mean that the land should be developed – a more responsible option would be to cap the site and reclaim the area as public open space.

Where it can be shown that pollutants are mobile, then steps should be taken to remediate the site. This should be done which minimises emissions to air of dust or gases which may be harmful to health, and the 'fit for use' policy should be properly applied. If land is to be used for housing then it must be properly clean – in most cases this will mean excavation – capping is not a sufficient safeguard. For non-domestic uses steps should be taken to remove all volatile or mobile contaminants prior to development – which also may mean excavation.

The history of the contaminated land issue has been mainly one of fudging since the 'section 143' register was first proposed in the Environmental Protection Act 1990. There is still no real outcome, and government guidance is still awaited. However the obligations on the Agency to act 'sustainably' and to protect the environment and human health should not prevent it from taking the appropriate action to characterise and control the hazards from contaminated sites.

4.9 Flytipping and the Landfill Tax

flytipping has always been a problem. Although there is some evidence, by and large anecdotal, that fly tipping of construction waste and some commercial wastes has increased following the introduction of the landfill tax, the problem of flytipping continues pretty much as it did before.

There are two reasons – in my own experience – why flytipping persists:

- A reluctance by the Agency, and Waste regulation authorities previously, to prosecute flytipping offences because of the very low fines that are levied;
- There is a general problem with derelict land about cleaning up tipping because of problems identifying the owners.

Unless these two key problems are resolved there is little hope of the Agency improving its role in the area.

Another option to consider would be working with local authorities to introduce better byelaws on public land. Prosecuting byelaw offences is much simpler, and it would be more applicable to urban areas – where most flytipping takes place – because the land with most tipping tends to be local authority parks, road verges, car parks, or Railtrack, British Waterways or water authority owned land. All these bodies have the power to make byelaws against flytipping.

4.10 Co-ordinating Approaches on Air Quality Management

Compared to the areas such as the West Midlands or Teeside, there are very few prescribed processes regulated by the Agency which could be improved in order to have better air quality. The main sources of air pollution in the Colne Valley area will be diffuse pollution blowing in from London and distance large combustion plants/power stations, and local sources, primarily cars and domestic fireplaces.

Local authorities have a much greater role in terms of managing ‘Local Authority air Pollution Control’ processes better, and in adopting better transport policies to reduce the distance vehicles travel.

The Agency does have a role by policing Part A processes further afield which impact on the area. And there is probably some room for improvement in combustion processes in the Colne Valley. But much of the burden lies with other authorities.

4.11 Low Flows in Rivers

Low flows are a significant problem, but managing the seasonal fluctuation in river levels is a greater issue than just controlling abstraction.

Changes in land cover – such as the change from grassland to farmland, will have a an effect on the level of rain infiltration because tilled soil desiccate quickly in sun and wind. But the

change in river valleys has an equal role. The introduction of land drainage in order to grow arable crops causes greater runoff of water. Likewise the increasing 'canalisation' of watercourses through town, and the culverting of smaller watercourses as part of developments all add to the effect of speeding water on its way to the sea.

Restricting the abstraction of groundwater will have an immediate benefit in areas where groundwater fed rivers have sunk into the chalk, but in the lower reaches of river valleys the buffering effect of gravel beds has been reduced as land is drained to a lower level, or flood control measures prevent rivers from naturally bursting their banks and flooding water meadows.

It would be helpful if the water companies were to voluntarily reduce abstraction – but they are unlikely to do that since they have a statutory duty to supply water. In the short term then the management of water meadows, flood plans and agriculture has as big a role to play (i.e., increasing the level of infiltration) as does reducing abstraction for water supplies.

4.12 Use of Water Within the Colne Valley Area

This is an area currently being reviews by the DoE through recent consultation documents on economic instruments, and from the Water Regulation Advisory Committee on replacing water byelaws.

Given that the Agency is the statutory body for water resources, not water supply, there seems little that can be done directly to improve the use of water in the Colne Valley area. Also issues like leakage are determined by the Office of the Water Regulation, not the Agency. All the Agency can do is highlight the damage done by the irresponsible use of water on the environment.

4.13 Frequency of Flooding in the Area

As noted earlier, flooding is not just a land protection issue, it is also a matter of maintenance of flood plains, and locating development well away from regularly flooded land.

The Agency should not automatically seek to prevent flooding by changes to the layout or grading of watercourses. Often flood alleviation is a matter of managing storm runoff rather than seasonal flow. Methods which seek to increase the capacity of the stormwater system through the development of balancing tanks and ponds should be tried first before changes are made to watercourses.

4.14 En-maining Watercourses in Lower Colne Valley

This is essentially a matter for who takes responsibility for flood defence works. The comment made above about the need for flood defence as opposed to 'planned' flooding in river valleys still hold.

4.15 Co-ordinating Approaches to Land Drainage

These points have already been made adequately elsewhere in relation to flood control.

4.16 Impacts of Mineral Extraction

As a non-renewable resource the extraction of primary aggregates should be minimised. Instead secondary sources should be used, primarily construction wastes. This should be the starting point of any policy before the release of land for mineral extraction is even considered.

Apart from the obvious land use implication, the Agency also has a role in this issue as waste regulator since it looks after aggregate recovery operations. This task must also be managed carefully since we do not want to replace one problem – minerals extraction – with another – the environmental impact of aggregate reclamation processes. Only by demonstrating that such processes can be responsibly run will the number of facilities increase.

Once issues of resource use have been dealt with, the three primary issues that must be addressed before the Agency agree to the release of land are:

- Effects on habitats;
- Effects on the flood plain/hydrology, not only in terms of dewatering of the works but on the flow of groundwater following restoration;
- The type of restoration scheme to be chosen – waste may be undesirable due to the problems of leaching, and recreation is a problem due to environmental impacts. Nature conservation is a growing, and relatively benign land use.

4.17 Reinstatement of Aquatic Habitats

Habitat replacement is important, but this should not be done just because of a perceived loss of habitat due to other effects. If we are losing wetlands we should seek to control the draining of land rather then taking other land that is less intensively farmed and flooding it.

Likewise where the excavation/desilting of streams and ponds can be demonstrated to have proven environmental benefits – but more importantly the systems exist after the work to manage the site – then there is nothing wrong with carrying out works to improve habitats.

4.18 Impacts of Low Flows on Biodiversity

Dealing with the ecological consequences of low flows is not just a matter of trying to make up the lost water by other means. There is law available if the Agency chose to use it.

Article 13 of the Habitats Directive[27] allow ‘responsible bodies’ to take action where a development would directly or indirectly affect a protected species. This is a very controversial part of the directive, and there have been a number of cases brought across

Europe regarding this, but it is the only way in which developments such as building or changes to land management can be controlled.

Likewise under the Conservation (Natural Habitats &c.) Regulations 1994[28], the Agency has a duty to review the consents it has issued to ensure that damage to protect 'European' sites and species is not taking place.

Starting from the position of using the law to require the review of development projects is a much stronger basis to work from rather than 'appealing' to the good nature of developers.

4.19 Archaeology and Conservation

The conservation of archaeological and historical features is one of the statutory functions of the Agency, and we generally support this work. But as with any other valuable resource, the emphasis should be on the non-destructive exploration of such remains. Remains should not be disturbed unless absolutely necessary.

4.20 Reconciling Recreation and Conservation

There is little point in improving the environment if recreation pressures substitute old development pressure for new ones.

All recreational development should be strictly limited within the carrying capacity of the location concerned. If there is any doubt that recreational pressures can be controlled then the precautionary approach should be taken and the development not permitted.

4.21 Recreation Strategies

We would support the evolution of a development strategy, but this must be as a means of managing the use of the environment for recreation, not exploiting it.

The same restrictions apply as outlined in 4.20 above – the development of any facility must be strictly controlled within the environmental limits of the site.

4.22 Lack of Signage

This is not necessarily a problem. In some instances taking signs down can be a good way of managing recreation/tourist pressures on sensitive environments!

The provision of interpretative board can be an useful aid to understanding the environment, but they are expensive and prone to vandalism. It may be more worthwhile exploring the development of written or audio resources to guide people through areas rather than fixed signs. Sometimes the signs themselves detract from the beauty of the environment.

4.23 Environmental Impact of Marina Developments

Again, the same conditions hold. The development of any facility should be kept within strict environmental limit. With regards to marinas special regard must be had to the pumping out of septic tanks and the loading of fuel.

Marinas should not be allowed where it would compromise sensitive water or land based habitats.

4.24 Impact of Major Development

there is little that can be said in response to this issue, other than that the Agency should evolve a capacity based set of principles for development across the Colne Valley area, and then rigidly apply them without fear or favour. Applying a strict capacity-led approach to development will not prohibit development in future. But what it will mean is that if particular locations are to be developed than appropriate steps must be taken to mitigate or eliminate and aspect of the development which would breach capacity limits.

5. Suggested Revisions to the Plan

There is very little that can be said about specific revisions to the plan because the points we have highlighted are so varied and wide ranging. In general we would request the following:

1. That a reasoned response is given to all the matters raised in this report, and where matters are not pursued then we would like a detailed explanation as to why.
2. If at any point the Agency consider that there is not enough information to make a decision, we are willing to supply more. Rather than provide reams of material we felt it better to produce a succinct report which could be augmented on request;
3. The issues regarding the explanation of, and the development of the plan around the statutory purposes of the Agency must be resolved;
4. The issues regarding the function of the LEAP as merely a policy statement, or more a resources manual which is intended as the main point of contact between the Agency and interested members of the public must be resolved. In essence this is a matter of improving the quantity and quality of the information presented, and making it more relevant to introduce members of the public to the regulatory structure the Agency works within;
5. Finally, this is a wide ranging and detailed response to the Colne valley LEAP. If you would like to have a meeting and discuss points in detail then we would be happy to oblige.

We look forward to seeing the comments received to the Colne LEAP, and the final version of the plan.

Paul Mobbs
January 1998

6. References/notes

1. Colne Local Environment Agency Plan Consultation Report, November 1997
2. This is a direct quotation from the shaded box on page (ii) of the plan
3. "*The Environment Agency and Sustainable Development*", DoE, Welsh Office, MAFF, November 1996.
4. "*Sustainable Development: The UK Strategy*", Cmnd2426, HMSO, January 1994.
5. "*Planning for a Sustainable Environment*", Andrew Blowers/Town and Country Planning Association 1993.
6. Climate Change: the UK Programme. January 1994 Cm 2427 HMSO. Updated by Progress Report on Carbon Dioxide Emissions, free DoE publication 95/EP/202 December 1995
7. Biodiversity: the UK Action Plan. January 1994 Cm 2428 HMSO
8. This Common Inheritance Britain's Environmental Strategy. September 1990 Cm 1200 HMSO
9. Paragraph 6.23, "*The Environment Agency and Sustainable Development*"
10. Paragraph 6.28 "*The Environment Agency and Sustainable Development*"
11. Paragraph 6.29 "*The Environment Agency and Sustainable Development*"
12. Paragraph 6.11 "*The Environment Agency and Sustainable Development*"
13. Council Directive 75/442/EEC as amended by Directive 91/156/EEC.
14. The provisions of the directive have been transferred in to UK law in the Waste Management Licensing Regulations 1994, SI. 1994/1056.
15. The relevant objectives are defined in Article 4, Schedule 4 of the Regulations.
16. Paragraph 6.16 "*The Environment Agency and Sustainable Development*"
17. The relevant issues to the granting of an exemption are outlined in detail on DoE circular 11/94, "*Waste Management Licensing*".
18. "*UK Radioactive Waste Inventory 1994*", DOE/RAS/96.001 (UK Nirex Ltd Report No. 695), May 1996
19. Paragraph 6.9 "*The Environment Agency and Sustainable Development*"
20. Paragraph 5.1 "*The Environment Agency and Sustainable Development*"
21. Survey work is currently being undertaken by Robert Hares/Dr. Neil Ward of the Department of Chemistry, School of Physical Sciences, Surrey University.
22. Royal Commission on Environmental Pollution 18th Report – "*Sustainable Use of Soil*", Cm3165, Feb. 1996.
23. Recommendations 3, 16, 20, and 36 are particularly relevant.
24. Waste Management Paper 26B, "*Landfill Design, Construction and Operational Practice*", Dept. of the Environment 1995.
25. "*Indicators of Sustainable Development in the United Kingdom*", DoE/government Statistical Office March 1996.
26. Figure quoted by Beirion Griffiths, Biffa waste, at the Harwell Waste Management Symposium 1996.
27. EC Habitats Directive, 92/42/EEC
28. Conservation (Natural Habitats &c.) Regulations 1994, SI. 1994/2716

