TRANSPORT AND THE ENVIRONMENT COMMITTEE

AGENDA

27th Meeting, 2002 (Session 1)

Wednesday 2 October 2002

The Committee will meet at 9.00 am in Committee Room 3 to consider the following agenda items:

1. **Items in private**: The Committee will consider whether to take items 4 and 6 in private.

2. **Highlands and Islands Ferry Services**: The Committee will consider a reporters’ paper on the draft service specification for Highlands and Islands ferry services.

3. **Petition PE327**: The Committee will consider correspondence relating to the petition and a draft motion for the proposed Committee debate on the Committee’s report.

4. **Water Environment and Water Services (Scotland) Bill**: The Committee will consider a draft stage 1 report.

5. **Rail Inquiry (in private)**: The Committee will consider a draft report on its inquiry into the rail industry in Scotland.

6. **2003-04 Budget Process**: The Committee will consider a paper by the Committee’s adviser on Stage 2 of the 2003-04 Budget Process.

Callum Thomson
Clerk to the Transport and the Environment Committee
Room 3.5, Committee Chambers
0131 348 (8)5208
e-mail Callum.Thomson@scottish.parliament.uk
The following papers are attached for this meeting:

<table>
<thead>
<tr>
<th>Title</th>
<th>Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reporters’ paper on the draft service specification for Highlands and Islands ferry services. (Agenda item 2)</td>
<td>TE/02/27/1</td>
</tr>
<tr>
<td>Paper on petition PE327 by the Blaringone and Saline Action Group on organic waste spread on land. (Agenda item 3)</td>
<td>TE/02/27/2</td>
</tr>
<tr>
<td>Draft report on stage 1 of the Water Environment and Water Services (Scotland) Bill (private paper). (Agenda item 4)</td>
<td>TE/02/27/3 (to follow)</td>
</tr>
<tr>
<td>Supplementary evidence submission from the Minister for Environment and Rural Development. (Agenda item 4)</td>
<td>TE/02/27/4</td>
</tr>
<tr>
<td>Supplementary evidence submission from SEPA. (Agenda item 4)</td>
<td>TE/02/27/5</td>
</tr>
<tr>
<td>Supplementary evidence submission from the Atlantic Salmon Trust. (Agenda item 4)</td>
<td>TE/02/27/6</td>
</tr>
<tr>
<td>Supplementary evidence submission from the Association of Salmon Fishery Boards. (Agenda item 4)</td>
<td>TE/02/27/7</td>
</tr>
<tr>
<td>Supplementary evidence submission from the Crown Estate. (Agenda item 4)</td>
<td>TE/02/27/8</td>
</tr>
<tr>
<td>Supplementary evidence submission from Scottish Natural Heritage. (Agenda item 4)</td>
<td>TE/02/27/9</td>
</tr>
<tr>
<td>Draft report on the inquiry into the rail industry in Scotland (private paper). (Agenda item 5)</td>
<td>TE/02/27/10</td>
</tr>
<tr>
<td>Correspondence between the Convener and the Minister for Enterprise, Transport and Lifelong Learning on the 2003-04 transport budget. (Agenda item 6)</td>
<td>TE/02/27/11 (to follow)</td>
</tr>
<tr>
<td>Paper by the Committee’s adviser on the 2003-04 transport budget (private paper). (Agenda item 6)</td>
<td>TE/02/27/12 (to follow)</td>
</tr>
</tbody>
</table>
Extracts from the Executive’s 2003-2006 Spending Proposals:
Building a Better Scotland.
(Agenda item 6)

Papers not circulated:

Agenda item 4
Members are reminded to bring the written submissions (on peach paper) and the SPICe briefing notes which were issued in August (plus the Bill; Policy Memorandum and Explanatory Notes).
REPORTERS’ PAPER ON HIGHLANDS AND ISLANDS FERRY SERVICES

Subject: The Scottish Executive proposals for tendering Clyde and Hebrides lifeline ferry services

Meeting: 27th Meeting, 2 October 2002

Authors: Des McNulty MSP and Maureen Macmillan MSP

Introduction

1. This paper outlines work undertaken by Des McNulty MSP and Maureen Macmillan MSP, and the Transport and the Environment Committee as a whole, into the Scottish Executive’s draft service specification for the tendering of the Clyde and Hebrides lifeline ferry services.

Background

2. On 23 January 2001 the Minister for Transport announced the Scottish Executive’s proposals for the tendering of Highlands and Islands Ferry Services. The proposals were subsequently put to the European Commission for consideration as required under the Regulations on State Aid to Maritime Transport.

3. The Committee considered the proposals on 28 February 2001 and agreed to appoint Des McNulty and Maureen MacMillan as reporters. It was agreed that the reporters would consider this issue further and report back to the Committee with proposed terms of reference for an inquiry into this issue.

4. On 12 June 2001 the Committee approved terms of reference for the reporters as follows:

Reporters will investigate

- the justification for and implications of the decision to tender lifeline ferry services in order to comply with EC guidelines on State aid in maritime transport.
- the development of the service specification for these services
- the need for an independent regulator, and an appropriate operator of last resort
- the structural, organisational and service delivery implications of this decision (including employment, pensions and Transfer of Undertakings (Protection of Employment) (TUPE) Regulations issues relating to Caledonian MacBrayne staff and the need for the service to be integrated with other modes of transport)

5. In addition to appointing reporters, the Committee also took evidence on the proposals from the Highlands and Islands Strategic Transport Partnership, local authorities, trade unions, and representatives of Caledonian MacBrayne on 18 June 2001, and the Minister for Transport and officials on 26 June 2001.
Initial Reporters’ Work

6. Reporters met informally with the Minister for Transport on 3 April 2001, and received background briefing on the issues from Executive officials on 28 April 2001.

7. On 11 July 2001 Reporters travelled to Brussels. They attended a meeting at Scotland Europa with representatives from CalMac, local authorities, Scotland Europa, the Scottish Executive and MEPs. Reporters also met with officials of the European Commission.

8. During the 2001 Summer Recess reporters travelled to the Highlands and Islands and Argyll and Bute, and engaged in discussions with local communities regarding the proposals.

9. The Executive appointed two sets of consultants to take forward matters relating to the tendering process. Burness Corlett and Partners (Maritime Consultants) were appointed to take forward the development of the service specification, reporters met with representatives of this firm on Tuesday 11 September 2001. Shepherd & Wedderburn WS and PriceWaterhouseCooper are taking forward the development of the structuring of the Vessel Owning Company (VesCo) and the Operating Company (OpCo), reporters met with representatives of these firms on 8 November 2001.

Reporters’ Interim Report

10. In September 2001, reporters made an interim report on the key issues emerging from Committee evidence taking sessions and reporters meetings prior to this date. The Committee as a whole considered the recommendations of the report at its meeting on 26 September 2001.

11. The Committee agreed to endorse the reporters’ report and forward it to the Executive. Lewis Macdonald MSP, the then Deputy Minister for Transport, issued a formal response to the report on 21 November 2001.

12. Summaries of both the reporters’ interim report and the Executive’s response to it are attached at Annex A and Annex B respectively.

Reporters’ Visit to Orkney

13. On 19 December 2001 the Committee considered and agreed a reporters’ trip to Orkney where a similar, although much smaller scale, tendering exercise has been undergone in relation to the Northern Isles ferry services. During the 2002 February recess reporters travelled to Orkney and engaged in discussions with representatives of local authorities and service users to gain an insight into the tendering process and lessons that might be applied to the tendering process for the Highlands and Islands ferry services.
Draft Service Specification

14. The Executive released the draft service specification for the Highlands and Islands ferry services network at the end of June 2002. The consultation period for the draft service specification is 12 weeks.

15. At its meeting on 22 May 2002 the Committee agreed a programme for reporters to consult on the draft service specification. The Committee further agreed that the Committee as a whole would then take evidence from the Deputy Minister for Enterprise, Transport and Lifelong Learning on the specification. Finally, the Committee agreed that, following this evidence taking session, reporters would produce a report on the specification for the Committee to consider and amend as necessary which would then be submitted to the Scottish Executive’s consultation.

Reporters’ Work on the Specification

16. The reporters consulted on the specification during the 2002 Summer Recess. Reporters held meetings in the Clyde and Western Isles area and spoke to individuals who will be involved in or affected by the tendering process regarding the possible impact of the proposed service specification. Reporters met with local authorities, representative groups of local service users, local service users, academics, economic development bodies, trade unions and representatives of Caledonian MacBrayne.

17. Reporters also met with the Executive officials who are taking forward the development of the service specification and also the structuring of VesCo in order to discuss the main proposals of the specification and also those aspects of VesCo which fall outwith the remit of the service specification.

Committee’s Work on the Specification

18. At its meeting on 4 September 2002, the Committee considered the key issues emerging from meetings held by reporters on the draft service specification. The Committee then took evidence from the Deputy Minister for Enterprise, Transport and Lifelong Learning on the specification at its meeting on 11 September 2002. The Official Report of the meeting is attached at Annex D.

19. The key issues emerging from the Reporters’ work and the Committee’s evidence taking session on the specification include:

- Scope of the specification
- Bundling of services
- Competition
- Costs and transparency
- Service levels and service development plans
- Fares
- Local employment issues
- Integration
- Transfer of services
• Provision of last resort

These issues are explored further below:

20. As a preface to the discussion of these issues, reporters want to highlight the fundamental importance of the ferry services to the economic and social sustainability of remote and island communities. Certain mainland peninsulas and all the islands off the west coast of Scotland are almost completely dependent on ferry services. The economies of the Hebrides and some of the more isolated Argyll islands are especially vulnerable to changes in the level of service.

21. Reporters consider that the draft service specification should form a framework for a service which not only provides a financially viable transport service but also forms the most effective basis for sustaining island life. While it is not part of the reporters remit to consider issues beyond the immediate impact of the tendering process, it was felt that the Executive’s proposals required to be considered in the broader context of rural strategy and in particular strategies in respect of island communities. So far as possible the reporters have assessed the proposals set out in the draft service specification with this in mind.

Overview of the Specification

22. Overall, the draft service specification was very much welcomed by the individuals and organisations consulted by reporters, including the Scottish Trades Union Council (STUC), Highlands and Islands Strategic Transport Partnership (HISTP) and Highlands and Islands Enterprise (HIE). In particular, reporters found there was strong support from the majority of individuals and organisations for the protection of current maximum fares and minimum service levels. In addition, the commitment within the specification to maintain current safety levels was strongly endorsed as the current Caledonian Macbrayne services were generally perceived to maintain excellent safety standards.

23. Reporters support the fact that the central provisions of the specification reflect the idea that the first tendering contract should, to a large extent, create a continuance of the practices on the current network, in order to assure service users that the tendering process will not destabilise the network.

Scope of the Specification

24. The reporters are of the opinion that the purpose of releasing a draft service specification should be to consult with interested parties on all subjects intended for the final specification. Concerns were expressed to reporters about the lack of detail in the draft service specification with regard to key areas of service provision including channels for consultation, fare structure and the provision of last resort for the network.

---

1 The specification proposes that the successful bidder must not exceed current maximum fares and must run minimum services according to the Summer and Winter timetable operated by Calmac prior to the transfer.
25. HISTP has submitted evidence to the Executive on methods of consulting with service users during the initial 5 year contract. The Executive intends to use this as a basis for its own draft proposals which, it is intended, will be open to consultation later in the year. The final proposals for methods of consultation will be incorporated into the final specification. In terms of fares, the Executive has identified the need for research to review the fares structure. However the results of this research will only be available in time to inform the second tendering process. Finally, although the provision of last resort will be the responsibility of the VesCo, the conditions for its provision are of central importance to the provision of services should the OpCo cease to serve the network. The draft service specification states that as soon as the VesCo is established it should begin producing proposals on the provision of last resort for consideration by the Executive.

26. Reporters are aware of the importance of consulting fully on all proposed provisions for the specification in order to ensure that the final specification is a comprehensive framework which takes into account the views of those organisations and individuals with relevant expertise. For this reason, reporters recommend that the Executive takes the steps necessary to ensure that the draft service specification which is produced for the second tendering process is a comprehensive document and that the actual process of consultation is both thorough and inclusive.

**Bundling of Services**

27. The draft service specification proposes that the Clyde and Hebrides ferry services network (services considered eligible for subsidy by the European Commission and subsidised by the Scottish Executive) should be tendered as a single bundle. It also proposes the inclusion of routes within the single bundle which were previously outside the network, the creation of new routes and the inclusion of mainland to mainland routes (namely Gourock-Dunoon (passenger only) and Tarbet-Portevadie) following the Commission’s confirmation that these services are eligible for subsidy.

28. Reporters found that there was general support for extending the network and tendering it as a whole as this is likely to reduce the potential for “cherry picking” of routes, provide the optimum value for public money and aid the integration of ticketing and marketing services.

29. The main point of contention expressed by various organisations regarding the bundling of the network is the proposal that the Gourock-Dunoon service should be restricted to a passenger only service. The importance of the issues relating to this route to the tendering of the network are explored further in the section below on Competition.
Competition

Competition and State Aids Rules

30. The Executive has said that, in order to comply with State Aid rules and Regulation 3577/92/EEC on Maritime Cabotage, it is required to put the Clyde and Hebrides network out to tender. The Regulations provide for freedom to provide such services within the Community. However, they also recognise that account should be taken of the nature of certain specific services and of differences in economic development between Community members.

31. Specifically, the Regulation takes into account the transport needs of island regions and establishes in Article 4 the conditions under which Member States may conclude public service contracts or impose public service obligations (PSOs) as a condition for the provision of cabotage services on shipping. PSOs are defined as obligations which the shipowners, if they were considering their own commercial interest, would not assume or would not assume to the same extent or under the same conditions.

Subsidy Levels and Stability

32. Under the current system, Caledonian MacBrayne negotiates the subsidy for the Clyde and Hebrides network with the Executive on an annual basis.

33. The draft specification states that, in accordance with EU State Aid rules, the tendering contract will be offered to the bidder who requires the ‘lowest financial compensation’ for the five year contract to comply with the core provisions of the draft service specification. The annual subsidy will be calculated according to the five year subsidy and the inflation rate. It will then be paid to the bidder in monthly instalments. Clearly, the new system will provide for stability in the subsidy levels for longer periods of time than the present system based on annual negotiation.

34. As outlined above, the Executive is required to award the tendering contract to the bidder who complies with the specification for the lowest level of subsidy. This requirement is based on the assumption that bidders, in competing with each other, will strive to produce the lowest possible bid. However, the Executive concedes that, so far there has been limited interest from potential bidders in the tendering contract. Potential bidders may be deterred by the constraints that the provisions of the specification would place on the Opco.

35. Reporters are concerned that, should the number of bidders be relatively limited, there will be insufficient competition to drive down the subsidy levels proposed by bidders. As a consequence of this, the successful bid may not provide the best value to the taxpayer.

---

2 see Article 87 (1) of the EC Treaty
3 Ministerial Statement on CalMac and State Aids
Implementation of Competition Rules

36. The draft specification states that EU competition rules are such that a vehicle ferry across the Clyde does not qualify for a subsidy as a lifeline service since there is an unsubsidised private sector competitor operating a vehicle service nearby. The passenger service is not considered to be in direct competition with the private sector competitor as it provides a different form of service, linking with other forms of transport and therefore the passenger service is eligible for subsidy. Following discussions with the Commission, the Executive announced that the passenger service would continue as a stand alone service within the undertaking. It was considered that the current passenger and vehicle service could not continue to carry vehicles and subsidise only the passenger service as this allowed for ‘subsidy leakage’.

37. The Executive has indicated that it is unlikely that the OpCo would have the resources to lay on an additional unsubsidised vehicle service separate to the passenger service. But concerns have been expressed by local residents that, should the vehicle service cease on the Gourock-Dunoon crossing, Western Ferries will become a private monopoly.

38. This relates to a broader issue of principle. If private companies were to set up rival services that are anticipated to be profitable, then these profitable routes may be removed from future undertakings. The result would then be the creation of private monopolies on routes which had previously been deemed to be lifeline ferry services. This process is what has been referred to as ‘cherry picking’ and one of the Executive’s key objectives has been to prevent this happening. If some of the more profitable routes were to be lost it is arguable that this could deter other bidders from tendering for the less profitable routes, necessitating increases of subsidy if those routes were to be retained.

39. A related concern is the potential difficulties that would arise if a private company stopped servicing a route. It was suggested to reporters that any service considered a lifeline route should have a provision for last resort provided by the VesCo regardless of whether or not OpCo ran the ferry service on the route.

40. The Committee raised these issues about competition with the Deputy Minister at its meeting on 11 September. Members pointed out that enforcement of European Competition rules could have the effect of creating a private monopoly on the Gourock Dunoon route and outlined the implications of this on the network as a whole as well as on users of the Gourock-Dunoon service. The Deputy Minister responded by stating that the Commission would not be concerned if a service was run by a private monopoly and argued that, where no subsidy is involved, competition is a matter for the marketplace and that any anti-competitive behaviour was a matter for the Office of Fair Trading.

41. Reporters are concerned that there seems to be no scope for interpreting European Competition rules to address the circumstances of the network where some routes may be profitable but the overwhelming majority are subsidised.

---

4 Per Deputy Minister for Enterprise, Transport and Lifelong Learning, Col, Official Report
Reporters take the view that the Commission’s rigid requirements for the enforcement of European Competition rules should be challenged since it seems illogical that the application of rules designed to protect and advance competition should have the effect of creating a monopoly on an important route for a single private provider. Rather than simply implement these rules, the Executive should strive to persuade the Commission to accept an interpretation which takes into account the unique circumstances of the network.

42. Another option outlined by the Deputy Minister for the Gourock-Dunoon route would be to remove the route from the undertaking and offer it to bidders prepared to run the service without subsidy. While it would be preferable to secure the agreement of the Commission to a relaxation of the rules the reporters recommend that the Executive should work with the relevant local authorities to market-test the route for profitability and give consideration to removing the service from the undertaking if it proves profitable.

Costs and Transparency

43. In evidence, the Deputy Minister did not contest the fact that the Gourock-Dunoon vehicle service may be profitable and therefore that cross subsidy may not occur. However, he explained that the Executive had not been able to develop an accounting mechanism that could demonstrate this argument to the Commission.

44. Reporters are of the view that this problem highlights the importance of setting up a transparent system of accounting to allow the Executive to provide a financial breakdown of route costs wherever necessary. Therefore reporters strongly recommend that the Executive continues to invest in developing transparent accounting systems in order to be able to justify policies for the second tendering exercise.

Service Levels and Service Development Plans

45. HIE’s key concern following tendering, was the lack of sailings to remote islands. For example there are no sailings at weekends to Coll during the Winter meaning that schoolchildren have to stay in youth hostels on the mainland throughout term time.

46. Local residents and service users have also told reporters that at present the service levels are unresponsive to changes in demand including the needs of growing industries, such as fish farming, which are of importance to island economies.

47. The specification acknowledges the existence of unmet demand on the current network and encourages the OpCo to try to tap into this demand by stating that the successful bidder can put on extra sailings or extra routes. The specification provides an incentive by allowing the OpCo to keep any profits arising from these initiatives.
48. Reporters note that, regardless of this incentive, the OpCo may lack the resources to experiment with new initiatives in order to develop its services given the constraints laid down in the specification in relation to fares and service levels. Although Reporters appreciate the need for these constraints within the initial tender, they recognise the need for flexibility in the long term in order to develop these services.

49. Reporters believe that there are insufficient incentives to encourage the OpCo to develop services which may not prove to be profitable in the short to medium term but which may meet broader social or economic objectives such as increasing employment levels on remote islands. Reporters also note that the limited contract period may deter the OpCo from developing longer term service development plans to respond to changing demands. Reporters were not convinced that VesCo would be either the most appropriate or the most capable body to carry out the task of taking forward service development planning.

50. Reporters note that the Executive plans to conduct research during the first two years of the contract to develop ideas for service developments. Reporters wish to stress the importance of exploring how service levels can be increased on the network and what mechanisms are required to allow services to develop in response to changes in levels of demand and changes in the needs of local residents. The reporters are of the view that there is a need for a structure separate from OpCo and VesCo to take responsibility for long term planning for the network. Reporters are also of the view that the structures for consultation should be radically overhauled to reflect the creation of the OpCo, the VesCo and any new planning structure.

51. Various proposals have been put to reporters in respect of schemes to test new initiatives. For example HIE and HITRANS suggested proposals for a route development fund jointly funded by economic development bodies such as themselves and the Executive. Under this scheme local authorities would bid for funds to run new routes and ascertain the demand and potential improvements these routes could provide. Reporters consider this to be a valid proposal, as was an alternative suggestion that a route enhancement fund be set up to allow additional sailings on existing routes by covering the marginal costs involved.

52. Reporters recommend that the Executive require potential bidders to contribute to the planning process in order to gain ideas from organisations with commercial expertise for new initiatives and development plans. The proposal by the Calmac Consultative Users' Committee to require bids for the actual specification and an additional bid detailing suggestions for a service which is not constrained by fares and service levels is also worth serious consideration. This is similar to the 'enhanceable franchise' idea developed by the Strategic Rail Authority. It would also seem sensible to require bidders to outline their plans for the longer term so that their plans can be taken into account in the future planning of the Executive and other stakeholders.

53. Reporters recommend that serious consideration be given to the ideas of a route development fund/ route enhancement fund Reporters also consider that methods of assessing potential demand for services not currently offered by the
Opco should be developed so that this information can be fed into the planning system.

**Safety**

54. The specification allows the OpCo to lay on any additional services beyond those detailed in the specification. Representatives from the STUC noted that the specification does not stipulate that these additional services should maintain the same safety levels and staff conditions as those prescribed in the document. Reporters can find no justification for a distinction being made between services within the undertaking and those outwith the undertaking so far as safety and staffing levels are concerned. Reporters therefore recommend the inclusion of a provision within the specification to ensure consistency in safety levels and staff conditions on all ferry services laid on by the successful bidder.

**Fares**

**Freight**

55. The specification does not include a provision for the current discount scheme for hauliers as it is seen to contradict European competition law. Hauliers, such as DR MacLeod, expressed their concern to Reporters at the lack of such a scheme since even with the discounts under the current scheme, the fares on certain routes make it financially unviable to transport high volume, low cost goods. Concerns were also expressed by hauliers that high fares for freight meant they were subsidising other users. Reporters acknowledge the need for an equitable discount scheme to redress the balance for hauliers, including small hauliers carrying small loads relatively infrequently who do not benefit from the current system based on volume and the number of crossings per year.

56. In evidence, the Deputy Minister stated that Caledonian MacBrayne was developing a discount scheme based on volume and long term commitment which he believed would not breach European competition law. He also stated that he was confident that a discount scheme would be included within the final draft service specification\(^5\). Reporters were very encouraged by the Deputy Minister’s comments and recommend that the Executive continues to develop its proposals for an equitable discount scheme.

**Peak Fares**

57. Currently the peak fare system is used on various ferry routes on the network including islands with infrequent lifeline services. Local residents such as representatives of Tiree Community Council have argued that the price of peak fares are extremely prohibitive and that a lifeline service should function on a first come first served basis.

58. Various organisations, specifically the Western Isles Tourist Board and the Calmac Consultative Users’ Committee, considered that there was scope for

\(^5\) Per Deputy Minister for Enterprise, Transport and Lifelong Learning, Col 3429, Official Report
increasing the economic efficiency of the fare structure on the network by attracting higher volumes of traffic paying lower prices as a reward for early booking or using less popular services rather than on the use of peak fares. In addition, reporters are of the view that, the Executive should research the advantages of discount schemes such as:

- transferable discount cards for businesses
- ferry passes for purchase by frequent users
- multiple journey tickets (beyond the current 10 journey maximum)
- young persons’ discount cards

Local Employment Issues

TUPE and Pensions

59. The specification states that whether the Transfer of Undertakings (Protection of Employment) (TUPE) Regulations will apply to the tendering process is a matter of law and whether it applies to the tendering process will not be confirmed unless the issue is taken to court. Consequently the specification does not dictate whether or not the successful bidder must comply with TUPE. However, the specification does include a provision that the OpCo should work on the assumption that TUPE does apply. If it is found by the courts that TUPE does not apply, the subsidy will be reduced by the equivalent amount that applying TUPE would have cost the OpCo. It is intended that this provision will remove any financial gains to be made by the OpCo from mounting a legal challenge against TUPE regulations. The specification includes a similar provision for the application of the Cabinet Office Statement of Practice in relation to the transfer of pensions.

60. Reporters found that groups were keen to retain the expertise of the Caledonian MacBrayne workforce and therefore wished to see TUPE implemented during the transfer of services. Trade union representatives in particular argued that the specification should contain the employees terms and conditions detailed in TUPE. This would ensure the effective application of TUPE regardless of whether the legal system rules that TUPE applies as the specification is a legally binding document in itself.

61. Members of the Committee outlined this proposal to the Deputy Minister in order to seek his views. The Executive’s view is that the provision of TUPE could not be incorporated into the specification as the provisions are extremely detailed and therefore their inclusion would make for a final document of an unwieldy size.

62. In response to this argument, reporters consider that there would be merit in including at least the baseline principles of TUPE within the specification and recommend that the Executive investigates the practicalities of this approach.

---

6 Per Deputy Minister for Enterprise, Transport and Lifelong Learning, Col 3435, Official Report
63. In evidence, one of the Deputy Minister’s officials argued that the inclusion of TUPE within the specification, without confirmation from the courts that TUPE would apply, could reflect a certain amount of presumption on the Executive’s part.

64. Reporters were not convinced by this reasoning, arguing that the provisions already in the specification regarding TUPE suggests that the Executive is of the view that TUPE should apply. Therefore, reporters do not appreciate why the inclusion of the provisions within the final specification would be considered more presumptuous than the Executive’s existing policy of discouraging legal challenges to the provisions within the current specification.

65. Reporters were encouraged by the Deputy Minister’s comments on his intention to provide effective safeguards to ensure the successful bidder enforces TUPE. Reporters would endorse a robust financial penalty system to ensure the application of TUPE at the point of transfer and also to ensure that the provisions of TUPE are not abandoned following the transfer or when terms and conditions come up for negotiation between Opco or VesCo and the relevant Trade Unions. Reporters recommend that these financial penalties are clearly set out in the final specification.

**Gaelic**

66. The specification states that ferries on certain routes should have announcements and signs in Gaelic as well as in English. However, it does not include any requirement for ferry crews to have any knowledge of Gaelic. Argyll and Bute Council and Western Isles Council noted to reporters that the ferry routes serve communities with a strong Gaelic tradition and that certain islands have a high population of people who are native Gaelic speakers. The reporters therefore consider it important for the specification to require each of these routes to be served by at least one crew member who can speak fluent Gaelic. Reporters consider that this provision would be particularly helpful in the unfortunate event of an emergency during a crossing.

67. Trade Union representatives were of the opinion that the proposal from the two Councils would not contradict EC procurement rules as the ability to speak Gaelic would not need to be a statutory requirement of all staff. At the Committee meeting, the Deputy Minister stated that the Executive was willing to explore the suggestion with the Commission. In the event that the Commission advises that the proposal breaches Procurement rules, reporters recommend that the Executive at least strengthen the wording within the specification to encourage the employment of one gaelic speaking member of crew on specified routes.

---

7 Per Sandy McNeil, Legal and Parliamentary Services Department, Scottish Executive, Col 3435, Official Report.
Integration

Tourism and Marketing

68. During meetings held in Stornoway, reporters heard various accounts of the lack of integration between different forms of transport in the Hebrides and the lack of accessibility to information on the ferry services. Reporters were concerned that the lack of integration combined with the lack of information would deter tourists from visiting the islands.

69. In terms of integration, reporters recommend that the specification includes wording which encourages the successful bidder to build partnerships with train and local bus operators and other ferry service operators. In terms of marketing and the provision of information, reporters recommend that the specification encourages the successful bidder to establish links with local tourist boards. 8

Performance Indicators

70. The performance levels outlined in the specification are tighter than those currently applied to Caledonian MacBrayne. Although good performance levels were deemed to be of importance, various organisations suggested that the rigid requirements of the specification militated against ferries linking up with other forms of transport in some instances. Ensuring integration of transport provision is particularly important when ferries may only sail three times a week to certain islands.

71. Reporters recommend that the Executive ensures that the proposed performance indicators do not adversely affect the successful bidder’s potential to integrate its ferry services with other forms of transport.

Transfer of Services

72. During the trip to Orkney reporters heard accounts from local service users of the problems encountered during the tendering process for the Northern Isles contract. The main problems seemed to be associated with the length of the tendering process with the final contracts being signed out approximately one year late. In addition, the stop-start nature of this procurement process appeared to put off potential bidders. Finally, the change of vessels on certain routes led to the need for changes to infrastructure at the ports including major new pier building projects. Unfortunately the delay in awarding the ferry contract meant there has been insufficient time available for port authorities to finalise capital schemes and deliver changes before the transfer of services (due to take place on 1 October 2002).

---

8 During a meeting with reporters, Neil McArthur, Chairman of the Western Isles Tourist Board stated that the Board would be very keen to build links with the local ferry services in order to capitalise on potential tourism markets.
73. Reporters wish to encourage the Executive to take note of the problems encountered in Orkney, analyse the reasons for the time delays in the tendering process and prevent their reoccurrence during the tendering of the Clyde and Hebrides ferry services.

**Provision of Last Resort**

74. As previously outlined, the specification provides very little detail on the provision of last resort. One of the few details it provides is that VesCo will be responsible for the provision of last resort and that if the OpCo fails to run a service for 7 consecutive days the VesCo will have the right to ensure provision of services.

75. Alastair Gow, Director of Transportation and Property from Argyll and Bute Council has informed Reporters that the Council consider 7 days to be too long a period to leave isolated islands such as Colonsay or Tiree without a ferry service. Reporters endorse this view on the basis of the evidence they have gathered on the dependency of island communities on their ferry services and recommend that the Executive reviews this provision accordingly.

**Recommendation**

76. The Transport and the Environment Committee is invited to consider and comment on this paper. An agreed paper could then forwarded to the Executive for a response, and, in addition it would be submitted as part of the Scottish Executive’s consultation on the draft service specification.

Des McNulty MSP  
Maureen Macmillan MSP  
27 September 2002
REPORTERS' INTERIM REPORT – KEY CONCLUSIONS

The Justification for Competitive Tendering

Groups such as trade unions raised doubts as to whether the competitive tendering exercise was necessary. Reporters came to the view that the tendering of the network of ferry services was necessary in order to allow for payments to be made in relation to Public Service Obligation contracts in line with Community law.

Consultation

The Executive has previously consulted on draft proposals for tendering these services in the document ‘Delivering Lifeline Ferry Services’. The Executive intends to conduct a wide-ranging consultation before this is finalised, with the objective of achieving innovation and improving service delivery. The reporters supported the objectives of the Executive and urged them to consult as widely as possible.

Issues relating to costs and transparency

Reporters noted that the Minister for Transport gave a commitment to protect current fares and levels of services. Reporters welcomed this commitment and also encouraged the Executive to examine whether there was scope for either reducing fare levels or improving levels of services within the budget for delivering these services.

Reporters noted that the OpCo should be set up in a manner that would allow it to be responsive and flexible both in providing commercial services, and in responding to the needs of communities. Reporters also noted that achieving this objective may require the OpCo to be granted a higher degree of commercial freedom than CalMac currently possesses.

Reporters raised concerns as to the transparency of current services operated by CalMac and the need to provide a financial breakdown of route costs in relation to those services.

Regulation of Service Delivery

Written evidence to the Committee from Professor Tony Prosser and Professor Neil Kay criticised the lack of a legislative framework and/or regulatory body to regulate such issues as fares, service standards and consultation with users.

The Executive have previously stated that, they do not see the need to implement primary legislation, or to appoint a regulatory body, in advance of the tender process and that they will monitor the situation over the term of the first contract and make an assessment of whether legislation is needed at that point in time. Reporters encouraged the Executive to fully examine the question of whether an independent regulator was needed, particularly in the event of the route being tendered in more than one bundle.
Reporters expressed concern regarding the accountability of the OpCo to communities. Reporters considered that any OpCo must be accountable to the communities that it serves, and responsive to their needs and concerns. The Executive was urged to consider ways of making an OpCo more responsive to it's users.

**Security of Service and the Need for an Operator of Last Resort**

The Executive proposals envisage a split between the vessel owning company (VesCo) and the operating company (OpCo) with the VesCo leasing the vessels to the successful tenderer (OpCo). The Executive has also proposed that the VesCo operate in a management role to procure ferry services as necessary should an operator fail to deliver its contractual obligations. It is seen by reporters as essential that the Executive ensures that an operator of last resort could step in to deliver services immediately and ensure uninterrupted service provision.

**Bundling Of Services**

Groups giving evidence to the Committee were united in wishing to see the network tendered as a single bundle. Reporters were also supportive of these proposals, considering it likely that tendering the network as a whole would reduce concerns over “cherry picking” of routes, provision of relief vessels and integration of through ticketing and marketing services.

**Local Employment Issues**

Groups giving evidence to the Committee were keen to retain the expertise of the current CalMac workforce, and to ascertain the extent to which the Transfer of Undertakings (Protection of Employment) Regulations (TUPE) will apply to any transfer of CalMac employees to a new operator.

The Minister for Transport previously stated that the application of TUPE is a legal matter which would be addressed at the time of transfer, and that issues such as this would be addressed in the draft service specification. It is understood that TUPE does not apply to the issue of pension rights, and reporters urged the Executive to investigate the pension rights of employees and provide some clarity on this issue.

Reporters noted that Regulation 3577/92/EEC allows a member state in imposing a PSO, to stipulate requirements in respect of ‘manning of the vessel’ and urged the Executive to explore the amount of flexibility that this provision allows, and to investigate to what extent they may specify matters relating to the manning of vessels in the service specification.
EXECUTIVE RESPONSE – KEY POINTS

Within the response the Deputy Minister was pleased to note that the Committee’s report welcomed the Executive’s commitment to protect fares and levels of service and noted the Committee’s points about transparency. The Deputy Minister added that the Executive would be making its approach to fares explicit within the draft service specification.

In response to the Committee’s concerns regarding the length of the tendering contract, the Deputy Minister stated that it would be preferable to be able to offer a longer contract, however five years is the length of contract allowed for a PSO under EC rules.

The Deputy Minister reiterated the Executive’s intention to consult widely on the draft service specification, noting that it would be consulting with all those consulted previously in relation to its paper ‘Delivering Lifeline Ferry Services’ and any other parties who have since expressed an interest.

The Deputy Minister also detailed a number of key players who were consulted at an early stage by consultants preparing the draft specification. These included trade unions, local authorities, the Shipping Services Advisory Committees (SSACs), the Caledonian MacBrayne Users’ Consultative Committee (CMUCC), the Highlands and Islands Strategic Transport Partnership (HISTP) and VisitScotland.

In terms of the bundling of services, the Deputy Minister noted that the Executive had received confirmation of the European Commission’s views on its proposal against splitting up the Calmac network and confirmed that the network would be tendered as a whole.

The Executive stated that it could not comment on VesCo’s role as the procurer of last resort as work was still ongoing on this proposal.

The Deputy Minister reiterated the Executive’s position on the need for a service regulator, claiming that the service specification will regulate fares and service levels and the operator’s contract will establish appropriate monitoring and performance regimes. In addition, he noted that a number of organisations including HISTP will be monitoring and reporting on the quality of service provided.

Finally, on the subject of local employment, the Deputy Minister recognised the concerns of the CalMac workforce and the importance of TUPE. The Deputy Minister stated that the Executive was still considering how best to address this issue and that of pensions.
The Convener: I welcome for the item on Highlands and Islands ferry services Lewis Macdonald MSP, the Deputy Minister for Enterprise, Transport and Lifelong Learning, and a number of officials from the Scottish Executive: Sandy McNeil, David Hart, Fiona Harrison and Claire Mollison. I understand that the minister wishes to make a brief introductory statement, following which we will move to questions. Jamie McGrigor MSP is interested in this issue and joins us today. I officially welcome him to the meeting.

The Deputy Minister for Enterprise, Transport and Lifelong Learning (Lewis Macdonald): I thank the committee for inviting me to give evidence today. I have a brief introductory statement to make, and I look forward to answering the committee's questions afterwards.

I will begin with the background. As members know, we have been required to undertake competitive tendering to meet European Commission regulations on competition for subsidised services and on the provision of state aids to maritime transport. Following a period of wide consultation last year, we submitted proposals to the Commission, including a strong case for a single bundle and for the inclusion of two mainland-to-mainland routes. The Commission responded in November last year, making it clear that it would not oppose our proposals to tender the network as a whole, which was a welcome development.

On 27 June this year, I published for consultation the draft invitation to tender service specification, which outlines our proposals for taking forward the tendering process. The document explains the principles that we have adopted and seeks views on the options that are open to us. It is a substantial document, as members will all now be aware, but people will be reassured to see the degree of detail to which we are determined to specify the service. We have been keen to give as many people as possible the widest possible opportunity to comment on the document.

We propose to tender the network as a whole, or as a single bundle, which reflects the overwhelming preference of those who responded to our initial consultation paper. That will maximise the economies of scale and will, we believe, maximise service reliability. It will also help to deliver our overriding aim of integrated transport.

We hope that it brings the further advantage of addressing the potential cherry picking of routes. It is likely to provide the optimum value for public money.

Following last year's discussions with the European Commission, we concluded that it would not oppose our inclusion of both mainland-to-mainland routes—Tarbert to Portavadie and Gourock to Dunoon—in the undertaking. It was equally clear that the Commission would not support a vehicle ferry subsidy on the Gourock to Dunoon route given the operation of a non-subsidised commercial company on the same route. Despite that, we believe that a robust case can be made for a service that would allow a direct connection for foot passengers between the bus station at Dunoon and the railhead at Gourock as part of an overall integrated transport strategy.
We would have preferred to continue the present provision of a passenger subsidy to a service that also carries vehicles but, following discussion with the Commission, we concluded that we should instead propose a passenger-only service as part of the single bundle.

With that one exception, we have been able to make proposals in the draft service specification to protect existing fare and service levels throughout the network. I was pleased to propose in our consultation paper a number of new and enhanced services, including the Mallaig to Armadale and Tarbert to Portavadie winter services; a new service across the Sound of Barra; an enhanced service across the Sound of Harris; the winter passenger service between Kilchoan and Tobermory; and enhanced services from Oban. Some of those improvements are scheduled to commence prior to the estimated date for the contract handover, and we are confident that they will be widely welcomed.

We have set out plans for a vessel-owning company, which will own Caledonian MacBrayne's vessels, piers and harbours.

I remind the committee of the proposed timetable to which we are working. The consultation period is due to close on 27 September. There has already been a strong response, and I expect more comments to arrive over the next couple of weeks. All of them will be considered fully, and they will help us to make decisions about the final invitation to tender. A prior information notice was issued to potential bidders over the summer to bring the consultation to their attention and to allow them to take part. We hope to commence the tendering process early in 2003, with the anticipated contract handover planned for late 2004.

I emphasise the fact that this is a consultation process. We have developed a draft of what we believe will best deliver a stable and expanding west coast ferry service over the next few years. We will, of course, take the views of the committee and of respondents to the consultation into account.

The Convener: Thank you for your introductory remarks. We have a number of areas of questioning on the specification and on your introductory remarks.

You recognise that there is considerable interest in the Gourock to Dunoon proposals. That is the first area to which we will turn. Maureen Macmillan, who has been one of the committee’s reporters on Highlands and Islands ferries, will open the questioning.

Maureen Macmillan: Des McNulty and I spent time in the summer going around the Western Isles and Argyll, gauging opinion on the draft proposals. Although the draft proposals were welcomed on the whole, some areas of concern were expressed. I want to discuss first the Gourock to Dunoon service.

The minister explained the reasoning behind the decision to restrict the Gourock to Dunoon ferry service to a passenger-only service. He told us that, after discussions with the Commission, it was felt that it had to be a passenger-only service because of the lack of transparency about cross-subsidy. However, there is a feeling in Dunoon that the situation has not been properly explained to the Commission. The vehicle service is not subsidised—it is profitable—and people feel that, if it was enhanced rather than abandoned, it could be even more profitable, meaning that less of a subsidy would be needed. People feel that the Commission should have taken that into account and that it would be only sensible to produce a solution that would require less of a subsidy.
There is also a fear that the proposals will result in the creation of a private monopoly on the Dunoon run across the Clyde. Has that been put to the Commission? Would that have any effect on the Commission's advice?

**Lewis Macdonald:** You raise several important points. The discussions that we have had with the European Commission have focused on the options for the service from Gourock to Dunoon. As committee members know, the current subsidy—the public service obligation support that is provided by the Government—is for the passenger service only. As I said in my introductory remarks, we had first to convince the European Commission to permit a mainland-to-mainland service. Having made that argument, we had to address the question of what kind of service between the two mainland points would be likely to be acceptable to the Commission.

The fundamental difficulty, which became clear following our discussions with the Commission, is the one that Maureen Macmillan has identified—the Commission's view of the question of subsidy. At the moment, we provide a subsidy for passengers only, but on a vessel that also carries vehicles. The Commission was not satisfied that the subsidy could be shown to subsidise only the passenger service and not the vehicle service. Had we been able to produce a proposal for the subsidy that demonstrably did not bring benefits to the vehicle side of the operation, we would be in a different position today. We explained in detail the history and nature of the service, and we ran through the options with the Commission.

You asked whether the vehicle service could run profitably. That is close to the heart of the issue. The fact that a profitable commercial vehicle service also operates on the route means that a subsidised vehicle service is not possible. Our difficulty was making that case. We wanted to demonstrate that there was a way of providing a subsidy for the passenger service that would not feed through to the vehicle side. However, we were unable to come up with a mechanism—an accounting system, if you like—that provided the reassurance that the Commission sought.

You wondered what the Commission was likely to look for. Although it has an overall responsibility to enforce European regulations and guidelines, it is not concerned with the level of public subsidy. The key judgment that it makes is not whether proposed service A costs the public purse more than proposed service B. Instead, the competition aspect and the question whether a subsidy will undermine the existing competitive position are fundamental to its considerations.

I was also asked whether the Commission would be interested in running a private monopoly on the service. The answer is no, because if no subsidy is involved, it is a matter for the marketplace. For example, bus operators provide other transport services for which there is no competition. The Commission would not require a public sector participant to enter the market in order to compete. [ Interruption.]

**The Convener:** I suggest that, before we go on, Maureen Macmillan switches her pager to silent.

I have a supplementary question. Is it not possible for the specification to tender out a subsidised passenger service and then for the successful operator to make a commercial decision to operate above the level stipulated in the specification? For example, if a car service turned out to be profitable, would the proposed set-up restrict commercial developments that would enhance the service? Does not the fact that the current private operator on the crossing is able to bid for the franchise influence the competitive side of things?
Just to move things forward, I ask Jamie McGrigor and Fiona McLeod to put their questions to the minister, who will then be able to answer them in bulk.

**Fiona McLeod:** You said that the decision was made following discussions with the European Commission. Are you prepared to make those discussions available publicly to allow us to find out what you said to the Commission and how it responded? I am still puzzled by your comment that the Executive was unable to propose to the Commission a transparent accounting system that showed that the PSO was not subsidising vessels. You were able to satisfy the Commission about the NorthLink contract, which contains both a PSO element and an element of commercial gain against a private operator. It would be interesting to see what questions you were asked and the answers that you gave.

**The Convener:** I ask the minister to respond to those two substantive questions before I bring in Jamie McGregor.

**Lewis Macdonald:** On additional services, I should make it clear that our draft service specification mentions a passenger-only service between Gourock and Dunoon. Nothing in the draft service specification or in European law would prevent an operator from providing a vehicle service at their own risk as a commercial undertaking. However, although one could provide an additional service over and beyond the subsidy, the difficulty lies with the vessel that carries the subsidised service.

11:45

In other words, if the vessel is a passenger vessel that is carrying passengers only, there is no difficulty in showing that the subsidy is being used only for the purpose for which it is intended. If subsidy is provided for passengers on a vessel that can do other things, perhaps commercially for a profit, it is not possible to show in the same way that the subsidy is ring fenced. There is nothing to prevent an operator from providing a vehicle service, but it cannot be the same vehicle service that uses public subsidy for passengers.

The convener asked whether Western Ferries, which is the private operator on the route to Dunoon, would be free to bid for the subsidised service and, if it were able to do so, whether that would make a difference to the question about fair or unfair competition. Part of the answer to that question lies in the approach that we have taken, on the basis of our earlier consultation, to pursue a single bundle. Under the bidding process, it will be open to any shipping operator to apply for all 26—or, as it will be—27 routes. Operators cannot apply for individual routes. I understand the convener's point, but I do not think that a direct correlation exists between the freedom to bid for the entire west coast ferry network and a single-route operator being undermined by a subsidised service on the same route.

I return to an important point that relates to Maureen Macmillan's earlier questions. If Western Ferries, as the private sector operator, behaves in an anti-competitive fashion, the community or any other user of the service can make a complaint to the Office of Fair Trading under competition law. Where competition is unfair, that option is always available.

Fiona McLeod asked whether we would publish our exchanges with the European Commission. We will not do that, as the code of access to those documents requires that we do not do so. Our discussions with the European Commission are, by their nature, confidential. It is worth noting that when we discuss matters with the
European Commission, as we have done, the discussions are informal. No formal process of prior approval for a tendering proposal exists in the way that the European Commission operates. Formal procedures would apply either if the Commission judged that we had breached European law, in which case it would take infraction proceedings against us, or if a complaint was made by a private sector operator—for example, that the way in which we had provided subsidy was a breach of competition law—in which case the Commission would have a quasi-judicial role in making a judgment on that complaint. The Commission's quasi-judicial role means that it will not issue a view formally in advance of a tendering process or of a complaint being made. Fiona McLeod also mentioned NorthLink. I will deal briefly with that question now—it may arise again later. The specification of the NorthLink PSO is different, as I think the member knows, from the west coast PSO. The competitive position that applies in the northern isles is not the same as that which applies on the Gourock to Dunoon route. When the PSO was let for the northern isles services, there was no competition for roll-on-roll-off freight services, for example, and there was no alternative lifeline service for Orkney or Shetland. That meant that no private sector competitor could say that the position undermined their market position and that they therefore had a complaint under European law.

The Convener: I will take Jamie McGrigor next. Des McNulty has also indicated that he wishes to ask a question. I ask both members to be as brief as possible, as we want the minister to cover a range of other issues this morning.

Mr McGrigor: The minister mentioned the phrase "fundamental to its considerations". Surely "fundamental to its considerations" must be the needs of the people of Dunoon. It is perfectly obvious to me from the meetings that I have attended that those people feel that they will be presented with an inferior ferry service from now on. How will you provide a sustainable ferry service to the people of Dunoon and the Cowal peninsula? How will you provide a service that is legal under European rules? Is not the interpretation of those rules at the heart of the issue? Proposals that have been made recently, including those by Professor Neil Kay, show that the way forward could be a roll-on-roll-off ferry service that would be legal under European rules. What in that proposal would be illegal?

The Convener: If Des McNulty asks his question, the minister can respond to both.

Des McNulty: The concern in Dunoon is twofold. People see it as paradoxical that, in supporting competition rules, one could end up with a situation where competition is actually denied. There seems to be a catch-22 element in the way that things are working. There is a prejudice towards common sense in such matters, but perhaps there is a commonsense solution.

The other issue is the relevance of the findings of the Deloitte & Touche report, which seemed to show that there could be a profitable vehicle service alongside a passenger service, which might be a way of getting round the competition requirements, linked through a public service obligation. That is what certain local councillors are suggesting.

Lewis Macdonald: Those questions raise several issues. I visited Dunoon three weeks ago and met community representatives and local councillors. I had a full discussion with them, from which I was able to glean the views of the community. I do not dispute that people in Dunoon would very much prefer to continue with the present service, which is why we tried to put that case to the European Commission.
The issue is about what service we can provide within European rules. The interpretation of those rules is a matter for the European Commission, which has a quasi-judicial role in interpreting those rules. In performing our duty of the stewardship of public funds and delivering services, we must have regard to the discussions with the Commission and reach conclusions on what would be permitted on the basis of those discussions.

On that basis, we have pursued and included in the draft service specification a passenger-only service because we believe that there is a clear case for that. Our conclusions lead us to believe that such a service can be sustained and will pass muster in that it will not be an infringement of European rules.

Des McNulty referred to the Deloitte & Touche report, which we have considered carefully. The report concluded that it was difficult to make a value-for-money case for any service on the route and we took account of that. We took our own view about what is defensible and desirable. That is why we have pursued the option of a passenger-only subsidy. Providing a separate vehicle service is a possibility, but not as part of the current public service obligation.

When I met community groups in Dunoon, I made it clear that we would consider carefully the responses to the consultation and take some guidance from the community about its wishes. We propose to include within the PSO a passenger-only service. At least one person who attended the meeting I was at in Dunoon suggested that it would be better to take that service out of the undertaking altogether. That would work only if the route were potentially profitable. We are sceptical about whether a combined passenger and vehicle service from Gourock to Dunoon could be made profitable. I do not think that the Deloitte & Touche report provides any substantial grounds for reaching that conclusion, although it suggests ways in which the service might be profitable. Our judgment of the current position in the marketplace is that it would be difficult for that service to operate at a profit.

However, in consulting, we are open to what people have to say to us. The possibility of taking that service out of the PSO was raised with me in Dunoon. We will consider that along with the other consultation responses.

**The Convener:** I ask Des McNulty to be brief, because we want to make progress.

**Des McNulty:** The minister's comment was helpful. Can Argyll and Bute Council and other interested parties be consulted on market testing? Are opportunities available to consider the issue in a serious commercial way, before the die is cast?

**The Convener:** Before the minister responds, I will give Maureen Macmillan another chance to speak. Some of the questions that she wanted to ask have been asked by other members. She can add comments before we move off the topic of the Gourock to Dunoon route.

**Maureen Macmillan:** I have been told that the vessel causes the problem for profitability and that a new vessel would have to be obtained. Does not the split between opco and vesco supply a mechanism for providing a vessel so that the service could be run profitably? I do not know whether that would be out of the undertaking in the bundle or whether a case can be made for taking the Dunoon to Gourock route out of the bundle and making it separate. Those alternatives must be considered.

The present Dunoon to Gourock service does not pose any threat to the competition. The competition is not cut-throat, because the other operator has 80 per cent of the vehicle traffic. Could not that be part of the equation? If the Dunoon to Gourock route
were separated from the rest of the CalMac bundle, it might not be challenged. If a challenge were made, it would not unravel the whole network. I do not know whether that is a possibility.

Mr McGrigor: The two routes are different. One is 70 per cent longer than the other and goes to a different place that is miles away. Both ferry services appear to be well used. If anything, there are queues to get across, so there is not a lack of people who are trying to use the services. If half the vehicle service is taken away, we will be left with an inferior service. That does not bode well for Dunoon, which is being paraded as a gateway to Scotland's first national park.

Lewis Macdonald: Maureen Macmillan is right to say that yet another option exists. At the end of the consultation, we will consider whether any mechanism has arisen from the responses that allows us to revisit with Europe the idea of ring fencing subsidy. We wish to have a result on that. We have not yet seen any proposal that would satisfy the European Commission's requirements on the competitive impact of public subsidy. That is a difficulty. However, as I say, we intend to continue discussions with the European Commission until we reach our final conclusions and publish our final service specification.

If we conclude that the current service configuration will be unacceptable to the European Commission, three options will exist. One will be the proposal in the draft service specification—a passenger-only service in the PSO. The second option would take the existing service out of the undertaking and encourage a commercial operator—possibly the winner of the tender for the network as a whole—to run the service as an out-of-undertaking service. The third option will be the suggestion that Maureen Macmillan highlighted—the possibility of unwrapping our single bundle, proposing the current Gourock to Dunoon service as a separate PSO and seeking Europe's support for that.

The third option has clear disadvantages. To avoid cherry picking and to keep the network together we have always argued for a single bundle. It would be difficult for us to change our position, but we would consider doing so if we felt that it would produce the result that we wanted with Europe. However, if we come to the conclusion that a passenger and vehicle service will not be acceptable to Europe as part of the wider package, it is no more likely to be acceptable as a stand-alone item.

Maureen Macmillan is right to suggest that the proposal would have the advantage of not jeopardising anything else in the single bundle. However, it would jeopardise our current proposal for a passenger service. We could not propose a combined passenger and vehicle service as a separate undertaking and, having seen that rejected, restore the proposal for a passenger service to the single bundle.

There are difficulties with proposing a separate PSO for the Gourock to Dunoon service, but that is one of the options available to us. We may conclude that a case can be made for the profitability of the route as a passenger and vehicle service, and that the community would prefer such a service to the one that we propose. However, before taking the next step we would need to consider Des McNulty's point about investment.

In my view, a passenger-only service within the single bundle is the best option. That is why we included it in the draft service specification. However, we are open to other suggestions.

Jamie McGrigor suggests that the routes are different and therefore not comparable. That would not be the Commission's view. It has accepted our argument that for foot
passengers alighting from buses or trains these are different routes, because the
terminuses are several miles apart. However, the distance between the two points
on either side of the Clyde is not significant for motor vehicle users. It does not affect
the Commission's judgment that the routes serve the same market.

**Nora Radcliffe:** The Executive has not included the current freight discount scheme
in the specification, as it is seen to contravene European competition regulations. What
steps has the Executive taken to develop freight discount schemes that comply
with European regulations? If no discount scheme is included in the specification, it
could be cheaper for hauliers to set up their own ferry services. What would be the
knock-on effects of the establishment of private freight services?

**Lewis Macdonald:** CalMac has just announced that it does not intend to increase
freight rates in the financial year 2003-04. Freight charges will be included in the
specification at a lower level than would have been the case had CalMac increased
them.

Nora Radcliffe is right to say that some aspects of the current freight discount
schemes are dubious as regards equity of treatment. CalMac is investigating what
discount schemes would comply with European law. The essential points are
competition and equity. In other words, discounts cannot be made on the basis of the
nationality or place of residence of a haulier. However, they can be made on the
basis of the long-term commitment of a haulier to a route and the volumes that they
intend to carry. That would allow for a scheme to be introduced that provides
significant discounts for hauliers who have a long-term interest in the service. We are
monitoring the development of CalMac's proposals and hope that they will be helpful
to hauliers on the west coast.

**Nora Radcliffe:** So you are confident that private arrangements will not be seen as
desirable?

**Lewis Macdonald:** I am confident that we will be able to develop a discount scheme
that is consistent in its application to all users and that will be attractive.

**Nora Radcliffe:** So the aim is to achieve the best service possible within the spec.

**Lewis Macdonald:** Yes.

**Maureen Macmillan:** When I took evidence, hauliers raised with me the problems of
small hauliers who perhaps do one journey a week and have done so for the past 30
years. They feel that they do not get any discount. They are local people who
regularly take loads to places such as Mull or Tiree, but they never build up enough
air miles or sea miles, if you like, to get their discount. Can you consider their
situation?

**Lewis Macdonald:** CalMac is examining two aspects. One is volume, which clearly
would not help those individual hauliers, and the other is long-term commitment to
the route, which clearly has the potential to help those individuals. I hope that what
CalMac proposes will include elements of both aspects.

**Maureen Macmillan:** I am conscious of the developing aquaculture industry in the
islands. Issues have been raised about the frequency of ferry services, because the
aquaculture industry obviously needs to deliver its goods fresh to market daily and
not a couple of times a week. Are you examining that issue more closely?

**Lewis Macdonald:** Yes. Again, the current operator is undertaking some of that
work. For example, in the Argyll islands CalMac is consulting on timetable
enhancements that would provide a more regular service to several islands that are
in the position that you described. CalMac takes on board a wide range of
considerations, including economic development aspects and others such as the use
of ferries by passengers and tourists. We would expect that process of going from
the draft service specification to the final specification to include enhancements that
are proposed in the interim period.

Des McNulty: Maureen Macmillan and I got a lot of information from the work that
we did in the
islands. There was general satisfaction that the specification would be based on
current and projected timetables and that there would be a measure of stability and
continuity. However, there was a view that that could lead to lack of flexibility in
relation to future needs and development opportunities.

It was suggested that there should be a separate route development or route
enhancement fund against which operators, local authorities or users could suggest
proposals for service enhancement. That could be funded temporarily or in the long
term as a means of route development outwith the specification. What is your view of
that suggestion? What criteria other than revenue criteria would be appropriate to
apply to a route enhancement or route development fund?

Lewis Macdonald: That is an interesting suggestion that we will consider carefully.
We have indicated our intention, during the initial tender period, to carry forward
work on enhancements for the second tender period. However, that would not just
come to conclusions every five years. We envisage that as a continuous process.
Any organisation that contributed to the support of services would obviously be
included in the decision-making process on such services.

The service specification is not set in stone. There is provision for some flexibility.
We would like to have flexibility for service enhancements of between 5 and 10 per
cent of the contract value. That would allow a fair amount of room for the
enhancement of services, when a good case can be made. Revenue would be part
of the grounds for such a case, but we would consider a range of other criteria that
apply to a lifeline service, including economic and tourism development and other
opportunities, as well as social need.

Des McNulty: You envisage the possibility, during the contract period, of being able
to access route enhancement or route development funds from a source that would
allow the provision of an improved service.

Lewis Macdonald: Potentially, as a continuing process.

Maureen Macmillan: There is a feeling, particularly in the Argyll islands, that the
enhancements need to be done speedily because of the deteriorating social and
economic conditions of some of the islands such as Tiree and Islay, where people
feel that their economy and lifestyle are stifled by the fact that there are not enough
ferry sailings. I would like to think that the enhancements will happen as soon as
possible rather than in the distant future.

Lewis Macdonald: I know that the consultation
on the enhanced timetables for Tiree is under way. We expect that to be a
continuous process.

Des McNulty: The contract will last for five years, but people have told us that the
planning framework for the development of these services may be eight, 10 or even
15 years, in the context of vessel acquisition policy and people making economic
commitments in the islands based on transport links and so on. Do you recognise
the fact that there is a need for a planning framework to be constituted, perhaps
separately from the direct relationship between the Executive and opco? It could be
a consultative element that would allow people to contribute to the development of a planning framework for those services.

**Lewis Macdonald:** We are consulting on our consultative structure, which, as members will know, is rather haphazard. At the moment, the west coast Scottish ferries have a more thorough consultative structure than exists in the northern isles, for example. We will shortly begin consulting on our proposals for strengthening the consultative structure across Scotland's ferry services.

As I indicated in response to your point about the rural development fund, the Mull overland route and the Islay-Jura overland route are substantial projects. They are some way from being included in the service specification, but we will continue to work with all interested parties in developing those ideas and looking to incorporate them at an important stage in the process.

**Des McNulty:** Almost everyone to whom we have spoken has said that the provision of lifeline services not only is a transport matter but is to do with the maintenance of the whole social and economic fabric and development of the areas that depend on them. In that context, do you think that there is a role for something like a strategic transport authority in the Highlands and Islands that would link together the transport issues with the economic development issues? How do you see the necessary joined-upness being created?

**The Convener:** I will allow Jamie McGrigor to ask a supplementary question before the minister answers.

**Mr McGrigor:** I actually have two questions on two separate points. The first is to do with the Ballycastle to Campbeltown service. I heard this morning on—

**The Convener:** Excuse me, but I do not think that that is directly relevant to the service specification.

**Mr McGrigor:** I thought that we were talking about Highlands and Islands ferry services. Campbeltown is in the Highlands and Islands.

**The Convener:** We are asking specifically about the consultation on the draft specification. That is a separate issue.

**Mr McGrigor:** The second point that I wanted to raise concerns NorthLink Ferries. Does that come under the subject that we are discussing?

**The Convener:** Again, it is separate. The session today is specifically about the Executive’s consultation on its draft service specification.

**Mr McGrigor:** Perhaps I could ask about the consideration of livestock sailings. What services will be available for the carriage of livestock from the inner isles of Tiree, Coll, Barra and Mull?

**Lewis Macdonald:** On the issue of a Highlands and Islands transport authority, I believe that the committee will be familiar with the Executive's position. There were discussions in the Highlands and Islands Strategic Transport Partnership about its development and the establishment of such an authority on the Strathclyde Passenger Transport Authority model. Those discussions have not reached a point at which that will happen in the short term. Perhaps the question will arise again should the HISTP choose to develop its partnership in that direction. That is perfectly feasible, but we have not yet reached that point.

The Ballycastle to Campbeltown route is an entirely separate service specification. The northern isles contract was entirely separate and the provisions are different. There is no specific provision in the Clyde and Hebrides ferry services specification that sets livestock aside from other freight and vehicle carriage.
The Convener: We now move to issues relating to the Transfer of Undertakings (Protection of Employment) Regulations.

Des McNulty: Is there any scope for the specification to contain a contractual requirement to ensure the effective application of TUPE regulations, regardless of whether they are found to apply by the courts?

Lewis Macdonald: No. The application of TUPE regulations is a matter for law. In the Clyde and Hebrides ferry services specification, we deliberately required bidders to bid as though TUPE regulations apply and to apply those regulations if they are successful in their bid. Those are firm and clear requirements on the bidders. However, at the end of the day, if a party decides on a court case and the conclusion is reached that TUPE regulations do not apply, the court ruling will overrule what is in the contract. The court's legal judgment on whether the regulations should apply will override anything in our tendering documents or the contract.

Des McNulty: My supplementary question relates to how such a situation will be dealt with. Irrespective of whether there is a court ruling, if a successful bidder were to begin to undermine the conditions that are apparently part of the agreement on maintaining the regulations, what steps could you take to ensure that those conditions are sustained? What would you do in such circumstances?

Lewis Macdonald: I hope to provide a safeguard against such a possibility. However, in the invitation to tender, we made it clear that the subsidy will be accordingly adjusted if TUPE regulations are found not to apply. We have removed any financial incentive for the operator to seek not to apply TUPE regulations, as the level of subsidy that they will receive for operating the PSO will be reduced. That is the best mechanism that is available to us to ensure that there is no reason for an operator to seek to overturn the application of the regulations.

Des McNulty: Will you apply financial penalties speedily? Are you sure that you have the legal basis to do so?

Lewis Macdonald: We are confident that we do. The penalties are built into the contract, so they would be immediate.

The Convener: I am not clear why it would not be possible to build in many TUPE protections in the contract. The contract for the service would be knowingly and willingly entered into by the bidder and I do not understand why that is not possible. The other issue that I want to raise does not relate only to TUPE regulations. In many areas, the Executive has given a commitment that it wants to see an end to two-tier work forces. With the contract, a two-tier work force could potentially apply if subsequent employees are offered lesser terms and conditions than existing employees. How does the Executive intend to address that issue?

Lewis Macdonald: On your first point, there is no mechanism in law that would allow us to override the law. The fundamental difficulty with the application of TUPE regulations is that the judgment on whether they apply is a matter for the law and not the Executive.

The Convener: Why is it not possible to define terms and conditions in the contract? That would not override the law. Operators could then bid for the contract on that basis.

Lewis Macdonald: Is your suggestion that we should specify the terms and conditions of contracts of employment in the contract for the tender?

The Convener: Yes.
Lewis Macdonald: That would be unwieldy and difficult to implement. We have gone as far as we can in laying down the contractual parameters within which potential operators must make their bids. I suspect that contracts of employment and contracts for provision of subsidised services are and will remain separate, but perhaps Sandy McNeil has a legal view on that.

Sandy McNeil (Scottish Executive Legal and Parliamentary Services Department): The foreseeable difficulty with the convener's suggestion is that there might be a certain arrogance on the part of the Executive in trying to specify the terms and conditions, given that the courts could unravel the contract at a later stage. Also, specifying all of the position points in the contract would make the contract decidedly unwieldy. The best method is to get the bidders to do the homework as though TUPE applied and to bid on that basis. We should not give employers any incentive to try to make TUPE not apply, which would reduce the financial consideration.

Lewis Macdonald: That is the legal position. As the responsible minister, I would be concerned about setting in stone the terms and conditions. I would not want to prevent the operator from enhancing terms and conditions during the term of the contract.

The Convener: I meant that a baseline set of conditions could be given.

Des McNulty: I want an assurance that, in the due diligence exercise in which I know you will engage, the employment conditions and job security issues are taken into account. Will you check that the bidders have planned to maintain the employment conditions?

The Convener: Will you also address the issue of the potential for a two-tier work force?

Lewis Macdonald: In considering bids, we will ensure that they comply with the specification, which includes the specification on the application of TUPE. TUPE has a number of difficulties, one of which is that it applies only at the point of transfer and does not impose on the future terms and conditions of members of staff, which would be the same with or without TUPE. That is not a matter that the Scottish Parliament can amend.

The best protection that the work force has in such circumstances is collective bargaining power. I expect the work force to use collective bargaining power so that the successful operating company protects the terms and conditions of existing members of staff and new employees. That is the extent to which we can provide protection for future terms and conditions.

Robin Harper: I gather that the Executive has concluded that a requirement for Gaelic-speaking ferry crews is counter to EC procurement rules, which means that the specification does not include any such requirement. Trade union representatives have informed us that it is important to have one Gaelic-speaking crew member on routes with a strong Gaelic tradition, particularly in an emergency. The trade unions are of the view that that would not contradict EC procurement rules because the ability to speak Gaelic would not be a statutory requirement of all staff. What is your view on that?

Lewis Macdonald: We considered carefully whether a case could be made for a requirement for Gaelic speakers on safety grounds. The Maritime and Coastguard Agency requires that crews should be able to communicate effectively with passengers, which provides general support for employing crew members who are
of the same language group as the majority of passengers. As I am a Hebridean, I
considered the matter closely, but there is no longer a population on the west coast
of Scotland that is unfamiliar with English. Therefore, the argument for a requirement
for fluency in Gaelic on the basis of safety is not easy to sustain.
A number of points in the specification are designed to encourage the use of Gaelic.
We are content to explore further with the appropriate authorities what minimum
requirement might be imposed. I take on board the point that was made by the trade
union side that it might not be a breach of European procurement rules to have a
requirement for one Gaelic speaker on vessels that serve routes where there are
many Gaelic-speaking residents. We must be confident that our solution does not
breach the rules.
Robin Harper: Does that mean that signage on the ships will not have to be in both
languages?
Lewis Macdonald: Part of the specification is that Gaelic signage on vessels that
serve those routes should continue. We will also require the continued use of
welcome announcements in Gaelic and English.
Maureen Macmillan: Which routes will have dual signage?
Lewis Macdonald: That will be decided after consultation with the appropriate
structures, such as local authorities.
The Convener: That brings us to the end of our questions. I thank the minister and
the various officials from the Scottish Executive.
Thank you for your letter of 3 July in which you reported the recommendation of the Transport and Environment Committee that the application of untreated blood and gut content to land be prohibited in advance of the implementation of the EU Animal By-Products Regulation.

I share your Committee's concerns but I think the short term objectives would be better achieved by accelerating the amendments to the Waste Management Regulations 1994 rather than taking precipitate action to prohibit outright the application of blood and gut content. The abattoir and rendering sectors are aware of the implementation timetable for the EU Animal By-Products Regulation, and I understand, are in the process of taking the necessary steps to comply with this forthcoming requirement. To impose an early ban of this activity would impose significant additional costs, and would be highly disruptive. These costs would be most likely to fall on livestock farmers in Scotland, who, as the Committee will be aware, are already in a vulnerable state after the events of recent years. We could also face significant storage and transport problems for these materials.

I am of course concerned that the type of isolated and extreme case that disturbed the Committee, is not adequately dealt with under the current regulatory system. Such action that is ultimately taken comes after the discomfort caused to neighbouring properties and communities has occurred. I think that the most appropriate route to prevent a repetition of these problems is to accelerate the planned tightening of the Waste Management Licensing Regulations 1994.

As you will know, the problem cases that have arisen use the exemptions under those Regulations intended for activities of agricultural benefit. In order to challenge this activity, the Scottish Environment Protection Agency (SEPA) has to prove that it is not for agricultural benefit. This has been shown to be a difficult matter to prove.
Our proposed amendments to the Waste Management Licensing Regulations would not only prevent untreated blood and gut content from being spread on agricultural land as an exempt activity, it would also place the onus onto the spreading contractor and the waste producer to prove the agricultural or ecological benefit of the spreading activity. This would bring the problem activities clearly under regulatory control, and allow SEPA to deal swiftly with problems.

I have therefore asked my officials to accelerate the proposed amendments to the Waste Management Licensing Regulations 1994. This is not an instant solution, it would still be necessary to consult on the amendments. However, it would bring about change to the current regime ahead of the EU Regulation.

I am copying this letter to the Clerk of the Committee.

ROSS FINNIE
Transport and the Environment Committee

Ross Finnie MSP  
Minister for Environment and Rural Development  
Pentland House  
47 Robbs Loan  
EH14 1TY

c/o Committee Chambers  
EDINBURGH  
EH99 1SP

3 July 2002

REPORT ON ORGANIC WASTE SPREAD ON LAND

I am writing in connection with the Transport and the Environment Committee’s recent report on Petition PE 327 by the Blairingone and Saline Action Group on Organic Waste Spread on Land. The Committee considered the Executive’s response to this report on 26 June 2002.

As you will be aware, in its report the Committee highlighted concerns regarding the spreading of untreated blood and gut content on land. The Committee welcomed in its report the intention of the Executive to move to implement the EU Animal By-Products Regulation as a means to address these concerns.

During the consideration of the Executive’s response to the Committee’s report, it was noted that the timescale for implementation of the EU Animal By-Products Regulation had slipped from summer 2002 to the first half of 2003, due to delays in the European Parliament.

The Committee heard evidence at its meeting on 26 June of the damaging environmental and health impact of spreading untreated blood and gut content on land, and members were concerned that this practice could continue during the period, of up to a year, before the new EU regulations are implemented. I attach a copy of the relevant extract of the Official Report of the meeting which outlines this evidence in more detail.

The Committee therefore agreed to write to you to recommend that the application of untreated blood and gut content to land be prohibited in advance of the implementation of the EU Animal By-Products Regulation. The Committee understands that it would be within your powers to implement such a ban.

I would be grateful for your response to this view expressed by the Committee. I should be grateful for a response by 7 August 2002, and for your response to be copied to the clerk to the Transport and the Environment Committee.
Yours sincerely,

Bristow Muldoon

Bristow Muldoon MSP
Convener
Dear Mr Muldoon

REPORT ON ORGANIC WASTE SPREAD ON LAND

Thank you for your letter of 3 July 2002. I welcome this opportunity to reply to the concerns expressed by the Committee regarding the operation of the Environmental Hazard Investigation Team (EHIT). I think it is important to draw the Committee’s attention to a number of inaccuracies and misrepresentations. First, I was not aware that the Transport and Environment Committee had recommended in its report that an investigation team should be established. To my knowledge it was Mr John B Milne, Director of Environment Services at Perth & Kinross Council who first suggested in a letter to Mr W Haidcrow, Director of the East Region of SEPA in February 2001 that an EHIT be set up. I was in full support of this suggestion. The purpose of the EHIT was to investigate the allegations of ill-health made by residents of Blairingone in relation to composting/land spreading activities and in doing so to follow the guidance laid out in the document produced in June 2000 jointly by Information Services Division (ISD) Scotland, Scottish Centre for Infection and Environmental Health (SCIEH), National Society for Clean Air, and the Scottish Environment Protection Agency (SEPA).

I can assure you that all of the allegations of ill-health of which I am aware have been thoroughly considered by the EHIT at two meetings, the first of which took place in October 2001 and the second in February 2002. The allegations received and made by five individuals contained in letters originally sent to Perth & Kinross Council and copied to me. These were summarised for the information of the EHIT at its second meeting, and three were considered by the EHIT. These were: skin blisters, scarlet fever, unexplained illness, asthma, viral infections, lymph gland infections, urticaria, gastroenteritis, viral meningitis, rheumatoid arthritis, ear/nose infections, slapped cheek syndrome and joint pains. The question of odour and visual nuisance is not part of the remit of the EHIT. The only other information sent to me (in December 2001) was a list of nuisance complaints from Clackmannanshire Council, but these contained no health information. It is incorrect to state that background information collated by local residents was tabled by SEPA at either of the EHIT meetings but was not considered by the EHIT. I am not aware of any such information. The only other information I have from Blairingone and Saline Action Group (BASAG) consists of summaries of press articles and other material downloaded from the internet relating to potential ill-effects of land spreading activities, but no further allegations of ill-health experienced by residents of Blairingone.

I received this from SEPA on 10 June 2002. I presume the Scottish Parliament has the same information since I was informed by SEPA at the time that this had been submitted to the Scottish Parliament as part of BASAG’s petition. I would like to repeat that I have received no information on alleged ill-health effects suffered by the residents of Blairingone who have been listed above the allegations that the EHIT has already considered.

Cont .....
22 July 2002

I can confirm also that SEPA did not in fact make an offer to the EHIT to pay for a consultant to take evidence from local residents. I have checked the minutes of the two meetings of the EHIT that took place and nowhere is this mentioned. It is the case that during a conversation with one of SEPA's officers last month it was suggested to me that a survey be carried out. After further discussion we both agreed that, in the absence of any further information about what health effects we might be looking for, this would not be appropriate. The EHIT has already debated the issue of whether or not to conduct a residents' survey.

At the first meeting of the EHIT in October 2001 (which incidentally, I was not at since I was on secondment to SCIEH at the time), the prospect of conducting a full study was discussed but the EHIT decided instead to gather initial information to see if there was a *prima facie* case for proceeding with a full study. This information was gathered, discussed at the second EHIT meeting in February of this year and there was full agreement that there was not enough evidence to justify moving forward to conduct a full-scale study. I can assure the Committee that the issue of cost and who pays for such a study was completely irrelevant. If the EHIT had considered that there were grounds for conducting a full-scale study then this would have been done without consideration of cost.

I would now like to reply to some of the comments made in the extract from the Official Report of the Transport and the Environment Committee of 26 June 2002. The terms of reference of the EHIT were taken from the guidance document dated June 2000 to which I have already referred. SEPA initiated the formation of an EHIT in response to health concerns expressed by residents to SEPA and to Perth & Kinross Council. Initiation of the EHIT pre-dates the report on the petition to the Transport and the Environment Committee. Incidentally, on a point of accuracy, I would like to reiterate that I was not actually at the first meeting.

I take issue with the comment relating to my featuring in releases issued by Snowie over the years. I was contacted by Snowie about four years ago to give my views on whether or not the allegations of ill-health being made by Blairingone residents at the time could be related to the land spreading/spraying procedures being undertaken. I merely reiterated the advice that I had given to Perth & Kinross Council; that I did not think that this was biologically plausible. If BASAG had contacted me and asked me the same question I would have given the same answer. What Snowie does with the information it receives is a matter for Snowie, and I take issue with the implication that I did not act in a disinterested fashion.

Information relating to skin blisters was not tabled by SEPA at any stage during the proceedings of the two EHIT meetings.

It is inaccurate to say that the EHIT has refused to meet BASAG. This offer has now been made on two occasions by SEPA on behalf of the EHIT but it is my understanding that BASAG has refused to meet the EHIT to explain how it carried out the investigation and why it reached the conclusions that it did. SEPA has also made it quite clear to BASAG that the EHIT is more than willing to consider any further information relating to allegations of ill-health among Blairingone residents, the implication being that if there is sufficient grounds to carry out a full study then we will do this.

I have to contest the implication that I am somehow driving my own agenda or railroad the EHIT into taking a view with which it is uncomfortable. The decisions reached by the EHIT have been unanimous and have the support of the consultants in public health medicine from Fife and Fife Valley NHS Boards and the consultant in environmental health from the SCIEH, all of whom are full EHIT members.

There is one final comment to which I feel I must reply. I am concerned to read derogatory comments made about me, attributed to a senior member of SEPA. It is crucial for the Committee to realise that SEPA was party to the decisions made by the EHIT and indeed were instrumental in setting the EHIT up. But SEPA now appears to be withdrawing its support for the decisions of the EHIT. I will be taking this matter up with the Chief Executive of SEPA in order to clarify SEPA's stance for the public record.

Cont. ....
22 July 2002

The Committee should also note that, in the interests of openness and transparency, the Minutes of each of the meetings of the EHIT were sent to BASAG and to Snowie Ltd in April this year along with a covering letter explaining what the EHIT had done, how it had considered the matter and what its conclusions were. Further, in April of this year I was asked by the Chief Executive of SHPA if the EHIT would be happy for the Minutes of its two meetings to be made available to the Transport and the Environment Committee of the Scottish Parliament. This was a matter which the EHIT had planned to discuss at the planned meeting with the BASAG which I hoped would take place some time over the summer months. But since BASAG has now refused to meet the EHIT, this discussion has not taken place. However, I am prepared, as Chairman of the EHIT to take the decision to send these Minutes to the Committee, again, in the interests of openness and transparency so that it can be seen what was discussed and what actions were agreed.

I would be more than happy to come with a colleague to give evidence to the Transport and the Environment Committee of the Scottish Parliament if you feel that this would be helpful.

With thanks,

Yours sincerely

Dr Mike Roworth
Consultant in Public Health Medicine (CD & EH)

Enc
Alleged Health Effects From Composting / Land Spreading Activities around Blairingone Village

Note of meeting held on Tuesday 23rd October 2001 @ 2:30 pm
SEPA Offices, Erakine Court, Castle Business Park, Stirling

Present
Brian Roxburgh (BR) Scottish Environment Protection Agency (SEPA)
Anthony Breslin (AB) Consultant in Public Health Medicine, Forth Valley NHS Board
Carrie Steain (JCS) SEPA
Ian Doctor (ID) Environmental Health, Clackmannanshire Council
Charles Saunders (CS) Consultant in Public Health Medicine, Fife NHS Board
Phil Mawhood (PM) Environmental Health, Fife Council
Roy Stewart (RS) Environmental Health, Perth and Kinross Council (PKC)
George Morna (GM) Scottish Centre for Infection and Environmental Health
Barbara Davies (SD) for Mike Roworth, Consultant in Public Health Medicine, Tayside NHS Board
Jacqueline Baird (JB) Environmental Health, PKC

Introductions / Background

BR thanked everyone for attending.

A brief outline and history of the Blairingone site was provided by SEPA and PKC, including:

- materials that had been spread on land in the area;
- background to the Waste Management Licensing Regulations and associated exempt activities applicable to the area;
- publication of the Strategic Review of Organic Waste Spread on Land Report (OWL Report) which is currently with the Scottish Executive;
- the Blairingone and Saline Action Group (BASAG);
- the current status of the petition to Parliament by BASAG;
- history of the Blairingone site, from the opencast activities to its purchase by Snowie and the resultant reinstatement of the site;
- outline of current composting operations at the site; and
- summary of complaints received by SEPA and PKC re. odour and alleged health effects;

BR explained that the purpose of the meeting was to explore appropriate action in accordance with the ‘Guidance Document on Dealing with Assertions of Human Health Risks or Effects from Environmental Exposures’. There were two clearly defined issues regarding the waste management operation - odour nuisance and the alleged health effects. The group was brought together to discuss the latter, and ascertain if it was likely that the composting / landspreading activities at the site could result in an increase in adverse health effects.

Discussion

CS stated that adverse health effects would be difficult to identify and attribute to the site operations. Conducting a full study and information gathering exercise would take several years and significant financial input. CS queried odour nuisance aspects, PKC and SEPA outlined the problems faced in dealing with odour nuisance complaints, in particular those from exempt activities. It was stated that the purpose of the meeting was to focus on the likelihood of harm to human health.

AB stated that stated that there would be two approaches in taking the issues forward - an initial examination of information already held and easily obtainable (e.g. prescription data, GP visits, complaints made to agencies), or a full study, which would be very costly and time consuming.

Considering the prominence of the site and the likely increase in other such composting facilities throughout Scotland, it was agreed to conduct an initial study.
GM queried the study methodology - how would the study area be defined, a comparison site identified, and how would the results be communicated to local residents? BD asked if a study based on local health centres would be possible, e.g. visits to GP’s by Blairingone residents compared to a similar village. Would a statistical analysis between exposure/outcome be possible? ID referred to experience with Paterson’s Landfill, Glasgow, and the possibility of drawing from the study conducted there.

Reference was made to the complaints of health effects made to RS and forwarded to SEPA and Mike Roworth earlier in the year. GM stated it would be difficult to determine health effects resulting from the activities in line with these complaints. The range of symptoms and non-specific complaints are such that biological plausibility would be difficult to determine. CS asked whether anxiety would count as harm to human health, and it was determined that this will not count in terms of the regulations.

GM referred to the guidance document and stated that the group were meeting at the second stage of the investigation - the next step would therefore be to conduct a literature review of possible health effects from site operations. This would be difficult to do due to the range of substances applied to land and being composted. A list of substances currently on the site would therefore need to be compiled, in conjunction with some study of the Blairingone area to produce a system profile and assemble epidemiological data. This would be a complex task, with historical data being difficult to use.

GM stated it may be possible to analyse reported symptoms and their relationship with timing of activities on site, and the spatial distribution of those reporting symptoms. A complaint recording and information sharing mechanism would therefore need to be organised amongst the agencies.

Details of the Environment Agency’s position on composting were circulated, with a copy of the Health Warning issued by the BASAG.

The possibility of a site visit was discussed, however it was felt that that would not add anything to the study. Site details such as location of dwelling houses from the site and the prevalent wind direction were discussed.

It was questioned who would be responsible for resultant actions, and taking the investigation forward.

GM stated that SCIEH would probably be prepared to look at emissions and effects, if a comprehensive list of materials and site activities was forwarded. This would be independent of symptom reporting.

According to the document ‘Dealing with Assertions...’ it was discussed that the CIPH in whose area the site is located should co-ordinate the group. BD stated that MR would be unlikely to object to taking the issues forward, and assume a co-ordinating role with input from all other agencies.

It was decided that the first action would be to gather details on the process and activity, and concurrently record any symptoms and complaints made by local residents. SEPA and PKC agreed to discuss the outcomes of the meeting and proposed assessment of the potential health effects with D Hope and D Johnston of the BASAG. At this stage Snowie’s involvement was not considered necessary.

Actions were agreed as below and a further meeting was proposed for late January 2002.

**Actions**

1. SEPA to circulate minutes of the meeting and schedule next meeting for early 2002.

2. SEPA to supply SCIEH with a comprehensive information on the composting activities at Blairingone.

3. MR to co-ordinate collation of complaints made so far to agencies present. PKC / SEPA to supply relevant information.

4. SCIEH to undertake preliminary literature review.
Alleged Health Effects From Composting / Land Spreading Activities around Blairstone

Note of meeting held on Tuesday 12th February 2002 @ 2:30 p.m.
SEPA Offices, Erskine Court, Castle Business Park, Stirling

Present

Mike Rowboth (MR)
Consultant in Public Health Medicine, Tayside NHS Board

V. Charles Saunders (CS)
Consultant in Public Health Medicine, Fife NHS Board

V.A. Anthony Breslin (AB)
Consultant in Public Health Medicine, Forth Valley NHS Board

V. George Morris (GM)
Scottish Centre for Infection and Environmental Health

V. Brian Roxburgh (BR)
Scottish Environment Protection Agency (SEPA)

V. Carrie Stain (JCS)
SEPA

V. Ian Doctor (ID)
Environmental Health, Clackmannanshire Council

V. Phil Mawhood (PM)
Environmental Health, Fife Council

V. Roy Stewart (RS)
Environmental Health, Perth and Kinross Council (PKC)

MR was introduced, and chaired the meeting.

Comments were invited on the note of the previous meeting. Note was agreed bar one typo. Final version will be circulated.

Actions were referred to - details of the waste types landspread or composted at Lambhill had been passed to GM. Limited SEPA analysis was also to be passed to GM.

A summary of developments since last meeting, in October 2001, also recorded: —

- OWL report - no change in status;
- Complaints - no further complaints regarding health effects; 1 odour complaint to SEPA; complaints to SEPA / PKC regarding compost being taken off-site.
- Waste types being composted and/or spread on land were listed - paper crumble, straw, food processing materials (yeast factory), and wood fibre from MDF plant. Spreading of thermally dried sewage pellets at Lambhill and other local farms was also mentioned.

From the information available, GM summarised some of the plausible emissions from the waste activities. VOCs, bacteria (and bacterial endotoxins), and fungal spores including Aspergillus species could all be evolved. CS queried whether any material likely to cause human health effects could be detected off-site. GM stated that fungal spores, bacteria and dust would all be transported readily in air and would inevitably be detectable. Neither SEPA nor the local authority undertake monitoring and as such there is no record of past exposures. Another difficulty results from the fact that the agents mentioned might be expected to be present as part of the normal background and it would be difficult to determine the true contribution of composting and other waste related activities to measured levels.

MR circulated copies of documents – a summary of alleged health effects (compiled from letters by the Blairstone residents in February 2001) and a letter from MR to RS (dated February 1998) regarding similar alleged health effects. It was noted that the alleged health effects had been reported in the early months on the year, and a seasonal pattern was therefore inferred. The consultants in public health medicine agreed that several of the alleged symptoms could be explained by the presence of respiratory infections, commonly seen at this time of year and were typical of what could be found in any other population.
MR referred to the guidance document and to the statements to be considered to conclude Stage 1. The following specific points were established:

1. Is there consistency between individuals in terms of the type of symptoms?
   No.

2. Is there any temporal pattern in the reporting of symptoms (which relate to composting activity)?
   No.

3. Is there any evidence to associate symptoms with climatic conditions?
   No.

4. Does the spatial distribution of complainants' homes, place of work etc. relate in any way to the geographical location of any putative source?
   Some of the complainants' properties correlated with the location of the waste activities and to the prevalent wind direction. 5 addresses were plotted on a map - 3 properties were upwind, 2 downwind (using the prevailing wind direction). The sample size of five was deemed too small to be conclusive.

Referring to the question of biological plausibility, GM stated that the anticipated releases (based on the limited information available) would not suggest a causal association with the reported symptoms of complainants.

It was agreed and concluded that the criteria for fulfilling Stage 1 had not been met, therefore it was inappropriate for the group to proceed to Stage 2. The group's remit was minuted as being restricted to assessing health aspects – any nuisance complaints would be dealt with accordingly by SEPA / PKC. It was noted that the document "Dealing with Assertions of Human Health Risk or Effects from Environmental Exposures: a Systematic Approach", produced by SCIEH, ISD, SEPA and NSCA had proved very useful in addressing the health concerns over the Lambhill site.

**Actions**

1. JCS to circulate approved note of meeting 23-10-2001 plus draft note of 12-02-2002.

2. SEPA / LA to forward any further allegations of health effects to MR.

3. MR to produce a summary letter outlining the groups' remit and findings. This will be sent to the Blairingone and Saline Action Group and Snowie with a copy of the note of each meeting.
3 July 2002

REPORT ON ORGANIC WASTE SPREAD ON LAND

I am writing in connection with the Transport and the Environment Committee's recent report on Petition PE 327 by the Blairingone and Saline Action Group on Organic Waste Spread on Land. The Committee considered the Scottish Executive's response to this report on 26 June 2002.

As you may be aware, the Transport and the Environment Committee recommended in its report that an investigation team should be established to investigate local residents' health concerns, and that it should operate as transparently as possible.

I am writing to you as chairman of the environmental hazard investigation team which was formed to investigate residents' concerns, to seek your comments on concerns which have been expressed to the Committee regarding the operation of the team.

In particular, concerns have been expressed that there has been insufficient consultation with local residents in order to obtain information on their particular health complaints. It has been claimed, for example, that background information collated by local residents and tabled by SEPA has not been considered by the investigation team, and that the Blairingone and Saline Action Group was not contacted by the team to provide its views. It has also been claimed that the investigation team turned down an offer from SEPA to pay for a consultant to take evidence from local residents.

I would be grateful if you could provide any comments on the concerns which have been expressed to the Committee and which are outlined in this letter. I attach, for your information, a copy of the relevant extract from the Official Report of the Transport and the Environment Committee of 26 June 2002.
I would be grateful for your response on this issue by 7 August 2002.

Yours sincerely,

Bristow Muldoon

Bristow Muldoon MSP
Convener
Dear Mr Muldoon

Report on Organic Waste Spread on Land

I refer to your letter dated 3 July 2002 to Ms Henton regarding the above, and to the copy of the letter of the same date to Dr Mike Roworth which accompanied it. As Director of Operations for SEPA, Ms Henton has asked me to reply on her behalf.

You should now be in possession of two letters which clarify both SEPA’s position and comments in response to concerns expressed by the people of Blairingone regarding the terms of reference and actions taken by the Environmental Hazard Investigation Team (EHIT).

The first is my letter to Mr Duncan Hope of the Blairingone and Saline Action Group (BSAG) dated 25th June 2002. This letter clarifies the position with regard to the EHIT and makes it clear that this Investigation Team was under way prior to the report from the Transport and Environment Committee, and was not in fact formed in response to a recommendation in that report.

BSAG expressed concerns to SEPA that all cases of illness in the village may not have been fully considered by the EHIT, and that the Team should reconvene to hear any new evidence. The EHIT members agreed to reconvene with the express purpose of meeting with Mr Duncan Hope and other members of BSAG and this offer was made to Mr Hope in a letter of 28 May 2002. The reasons for holding the meeting were to explain the terms of reference of the EHIT, the type of evidence considered, and the reasons for the actions and conclusions reached at each stage. It was not to be a forum for discussion individual medical cases, but if there was any new evidence that BSAG were aware of then this could also have been presented to the EHIT during the meeting. Disappointingly, Mr Hope of BSAG declined to meet the EHIT stating “With regard to a meeting I see no useful purpose whatsoever in a round the table meeting at Stirling between EHIT and myself”. However, in my letter of 25 June referred to above I made it clear that the offer to meet under the above terms remains open and I would sincerely hope that BSAG take up this opportunity to put their concerns directly to the Investigation Team. If they refuse to do so SEPA could not support BSAG’s position for further consultation to be undertaken.

The second letter referred to in paragraph two is Dr Roworth’s reply to your letter of 3 July 2002 regarding the villagers’ concerns on the operation of the EHIT. Dr Roworth gives a full précis to which I have nothing to add except to support the efforts made by the EHIT to clarify to situation at Blairingone.
SEPA's position is very simple. We require to know if there are any health affects on the residents at Blairingone or not. We would then be in a position to take appropriate action based on the Regulations we have responsibility for enforcing.

I trust that this clarifies our position but if you require clarification on any point then please do not hesitate to contact me.

Yours sincerely

Willie Halcrow
Director of Operations
Mr Duncan Hope  
Blairingone & Saline Action Group  
Broom Farm  
Blairingone  
Dollar  
FK14 7NH

25th June 2002

Dear Mr Hope

ENVIRONMENTAL HAZARD INVESTIGATION TEAM (EHIT)

I refer to your letter dated 12 June 2002 regarding the above. The Chief Executive has instructed me to reply on her behalf. I confirm that SEPA has received copies of the papers to which you referred.

I would first of all like to clarify an apparent misunderstanding regarding the origin of the EHIT. As stated in my previous letter of 29 May 2002, SEPA initiated the formation of an EHIT in response to health concerns expressed to ourselves and Perth & Kinross Council. Initiation of the EHIT predates the report on the petition to the Transport and Environment Committee in which SEPA referred to the fact that the EHIT was already being formed to address previous health concerns. The EHIT's findings were not therefore the results of a parliamentary investigation.

SEPA is not expert in matters relating to human health. It is for the public health authorities to take decisions and advise in this area. It was therefore appropriate that Dr Roworth was Chairman of the EHIT. The arrangements were also in accordance with the agreed and published guidance. Please note that the Consultants in Public Health Medicine for Forth Valley and Fife Health Boards (namely Dr Anthony Breslin and Dr Charles Saunders respectively) also served on the EHIT and were in total agreement with the Group's actions and conclusions. All members of the EHIT were in full agreement with the conclusions reached. I cannot agree with your comments regarding pre-judgement of the issue.

Once again, I must refer you to Dr Roworth for answers to your questions regarding the terms of reference for the EHIT. An offer has been made for yourself, as Chair of BSAG, to meet with the EHIT so that these matters could be explained, and the reasoning behind decisions discussed with you. The reconvened meeting was also intended to inform BSAG of the evidence that the EHIT had considered and allow you the opportunity to bring to the EHIT's attention any other specific evidence of incidents and health effects which the Blairingone residents would like the Team to consider.
The offer to meet with you and other members of BSAG remains open. I hope that BSAG will be able to take this opportunity to take matters forward. I do hope that BSAG will take up this offer, SEPA believes that constructive dialogue is essential. Please let me know if BSAG will accept this offer.

Yours sincerely

W Halcrow
Director of Operations

Copy to:
Dr Mike Roworth
George Reid MSP
Bristow Muldoon MSP
John McAllion MSP
Dear Ms Henton

REPORT ON ORGANIC WASTE SPREAD ON LAND

I am writing in connection with the Transport and the Environment Committee’s recent report on Petition PE 327 by the Blaringone and Saline Action Group on Organic Waste Spread on Land. The Committee considered the Scottish Executive’s response to this report on 26 June 2002.

As you may be aware, the Transport and the Environment Committee recommended in its report that an investigation team should be established to investigate local residents’ health concerns, and that it should operate as transparently as possible.

At its meeting on 26 June 2002, the Committee agreed to write to Dr Mike Roworth, as chairman of the environmental hazard investigation team which was formed to investigate residents’ concerns in order to seek his comments on concerns which have been expressed to the Committee regarding the operation of the team. I attach a copy of this letter for your information.

The Committee agreed to write to you to seek SEPA’s views on the concerns which have been expressed regarding the operation of the environmental hazard investigation team chaired by Dr Roworth.

I would be grateful if you could provide any comments by 7 August 2002.

Yours sincerely,

Bristow Muldoon MSP
Convener
12 September 2002

Dear Bristow,

Report on organic waste spread on land

Thank you for your letter of September 2002 in which you enclosed the responses you received from Dr Roworth and SEPA in connection with Petition 327 by the Blairingone and Saline Action Group on organic waste spread on land.

I note that you are mindful in taking this petition forward in September and are seeking to refer it to my committee in relation to public health issues.

The Health and Community Care Committee has already considered this petition at its meeting on 29 November 2001. The Committee was of a mind to take no action on this matter. Given the Committee's earlier decision I do not intend for the Committee to reconsider the health aspects of this petition. My Committee’s workload over the coming period is extremely onerous given our scrutiny of the proposed mental health legislation, the timetable of which cannot be compromised. We are also carrying out other agreed inquiries. You indicate that you wish to look at this petition in September, my committee would not be in a position to examine this matter in the period you propose as our forward workplan is fully committed until February 2003.

Yours sincerely

Margaret Smith MSP
Convener
Health and Community Care Committee
Dear Margaret,

REPORT ON ORGANIC WASTE SPREAD ON LAND

I am writing again in connection with the Transport and the Environment Committee’s recent report on Petition PE 327 by the Blairingone and Saline Action Group on Organic Waste Spread on Land.

You will recall that I wrote to you previously on this issue on 3 July 2002, following the publication of the Scottish Executive’s response to the Transport and the Environment Committee’s report. My letter stated that the Committee had agreed to seek written comments on the investigation into Blairingone residents' health concerns from Dr Mike Roworth, chair of a local environmental hazard investigation team, and SEPA.

As I previously indicated, the Committee is mindful in taking this issue forward of the particular remits of the Transport and the Environment Committee and the Health and Community Care Committee. I therefore proposed in my letter of 3 July that I would pass to you the responses received by the Committee from Dr Roworth and SEPA, to allow the Health and Community Care Committee to take any further action it considered necessary. These responses have now been received, and are enclosed with this letter.

I anticipate that the Transport and the Environment Committee will wish to consider the issue of organic waste spread on land again at a committee meeting in September. It would therefore be very helpful if your Committee was able to provide an early response to the Transport and the Environment Committee indicating what, if any, further action it planned to take on the health aspects of this petition.
Please do not hesitate to contact me if you would like to discuss this matter further.

Yours sincerely,

\[Signature\]

Bristow Muldoon MSP
Convener

cc Jennifer Smart, Clerk to the Health and Community Care Committee

enc Letter from SEPA, 8 August 2002
   Letter from Dr Mike Roworth, Tayside Health Board, 22 July 2002
TRANSPORT AND THE ENVIRONMENT COMMITTEE

PETITION PE 327 BY THE BLAIRINGONE AND SALINE ACTION GROUP ON ORGANIC WASTE SPREAD ON LAND

Subject: Paper on the Committee’s consideration of Petition PE 327 by the Blairingone and Saline Action Group on Organic Waste Spread on Land

Meeting: 27th Meeting, 2 October 2002

Author: Alastair Macfie (Senior Assistant Clerk)

Introduction

1. Members will recall that at the meeting of the Committee on 26 June 2002, the Committee considered the response from the Scottish Executive to the Committee’s report on Petition PE327 by the Blairingone and Saline Action Group on Organic Waste Spread on Land.

2. This paper invites members to consider various pieces of correspondence received by the Committee in response to further issues raised at the Committee meeting on 26 June. Members are also invited to consider a motion for the Committee’s proposed debate in the Chamber on its report.

Correspondence Received by the Committee

3. At the meeting on 26 June, the Committee agreed to write to the Minister for Environment and Rural Development to recommend that the application of untreated blood and gut content to land be prohibited in advance of the implementation of the EU Animal By-Products Regulation. The Committee has received a response from the Minister and this is attached as an annex to this paper. Members may also be interested in an oral answer given by the Minister to a question by Cathy Peattie MSP on 12 September 2002. The relevant extract from the Official Report is set out as an annex to this paper.

4. On 26 June, the Committee also agreed to write to, firstly, the chairman of the Environmental Hazard Investigation Team which is considering the health concerns of the residents of Blairingone and, secondly, SEPA on matters relating to the work of the Investigating Team. Responses have now been received and are attached to this paper.

5. The Committee also agreed that the Convener would consult with the Convener of the Health and Community Care Committee on how to further address those elements of the petition relating to health matters. The Committee wrote to the Convener of the Health Committee earlier this month, enclosing the responses received from the chairman of the Environmental Hazard Investigation Team and SEPA. A response has been received from the Convener of the Health and Community Care Committee indicating that no further action was proposed on the petition. This response is also attached.
Parliamentary Debate

6. At its meeting on 26 June 2002, the Committee agreed to seek a debate in the Parliament on its report. The Committee’s bid to the Conveners’ Group for a Committee debate in the Chamber has now been approved. The debate will start at around 11.30 am on 10 October and it has been scheduled to last for one hour. It is usual practice for the Convener to lodge a motion on behalf of the committee drawing the attention of the Parliament to its report.

7. The following wording for the motion to be debated on the report is proposed—


Recommendation

8. The Committee is invited to consider the various pieces of correspondence received by the Committee and circulated with this paper. The Committee is also invited to agree the wording for the motion to be debated at the debate on the Committee’s report.

9. In light of the forthcoming debate on the Committee’s report (where any outstanding issues may be pursued by members), it might be appropriate to conclude the Committee’s formal consideration of the petition at this meeting.

Alastair Macfie
Senior Assistant Clerk
September 2002
Abattoir Waste

11. Cathy Peattie (Falkirk East) (Lab): To ask the Scottish Executive when it will publish proposals for legislative change to tighten up the controls on the spreading of abattoir waste on agricultural land. (S1O-5551)

The Minister for Environment and Rural Development (Ross Finnie): We intend late this autumn to issue a consultation paper on appropriate amendments to the Waste Management Licensing Regulations 1994. The key proposal in, or purpose of, the amendments will be to alter the burden of proof for an exempt activity. Those who intend to spread waste would have to demonstrate agricultural benefit before spreading.

In addition, a new animal by-products regulation is due to be adopted by the European Community in the autumn. We plan to consult on domestic regulations before the end of the year.

Cathy Peattie: Is the minister aware that, when abattoir waste and other substances have, under a waste exemption licence, been spread on fields in Polmont and Bo'ness, there have been spillages, animals in adjacent fields, nauseating smells and general public nuisance. It seems that local authorities and the Scottish Environment Protection Agency can do nothing about it. Will the minister agree to publish the recommendations that SEPA made in the report on the matter two years ago?

Ross Finnie: I am conscious of what happened and of Cathy Peattie's interest in the subject. Several breaches appear to have occurred. There was a question about the use of the derogation, which is why we are trying to change the burden of proof. There were also clear breaches in the way in which the material was transported. We are in discussion with SEPA about the guidance on such matters. We hope to present that guidance.

Mr George Reid (Mid Scotland and Fife) (SNP): The minister will remember that the original petition to the Parliament from Blairingone and Netherton raised health and environmental issues. Although the Executive is making progress on the environmental aspect, does the minister agree that it was unacceptable for the investigation team to release material to the contractor before it released it to Parliament? Does he also agree that the villagers' health concerns will be addressed only when the investigation team meets them face to face, as the Parliament's Transport and the Environment Committee did?

Ross Finnie: I acknowledge George Reid's interest in the matter. I am grateful to him and to Cathy Peattie for the way in which they have communicated with me.

On the health issues, George Reid knows the way in which the investigation was structured. The hazard investigation team that SEPA set up was asked explicitly to
consider health matters. Following representations, SEPA asked the team to reconvene to give further consideration to those points. I understand that the chairman of the team has offered to appear before the Transport and the Environment Committee. It would be useful for the committee to pursue that line of action, as well as for me to look into the matter.
I promised to provide you with further information on a number of issues relating to the Water Environment and Water Services (Scotland) Bill. I understand that in order for the Committee to be able to properly consider this evidence in the preparation of its report on Stage 1 of the Bill that it is required by today. The timescale means I have not been able to provide as much detail as I otherwise could have but I hope the information is useful to the Committee nonetheless.

When considering the material I have provided it is important to keep the Bill in its proper context. As the Committee is aware, Part 1 of the Bill is designed to implement an unavoidable European obligation – the Water Framework Directive – in Scotland. In designing the Bill we have sought to do so carefully and, most importantly, in a way sensitive to Scottish circumstances and Scottish needs. I firmly believe we have achieved that goal.

As members of the Committee will be also be aware, the United Kingdom has been the subject of criticism in the past because of a rather reluctant approach to implementation of European Directives. Those who have to comply with the obligation have suffered as a result. The Executive does not believe that this approach is sensible. We will not impose burdens on water users earlier than necessary – but we believe that the timely implementation of this Bill will put us ahead of the game across Europe in terms of implementing sensible river basin planning.

I stressed in my introductory remarks on Wednesday that the Bill is founded on the principles of sustainable development. I think this bears repeating. The Bill is not about regulation for the sake of regulation. The Bill provides for controls on water users that are selective – only effected where environmental harm is being caused – and proportionate – pitched according to the degree of likely harm. Moreover, the controls will be exercised in the context of an open, transparent and accountable planning system and there will be a sensible balance struck between environmental aspirations and social and economic needs.
I now turn to the report your Committee received from the Finance Committee on the Bill. I understand my officials have already provided you with a copy of the report by Professor Nick Hanley of Glasgow University supporting the assessments of the benefits set out in the financial memorandum and the WRc report. Dealing with this issue first, I understand that comparing costs that may hit water users in the pocket with more intangible estimates of the value of increased amenity is not simple. However, in considering the value of the Bill as implemented to Scotland as a whole I believe it is incumbent upon us to consider properly both sides of the cost/benefit balance. Professor Hanley is a leading academic in his field and the benefits assessment was thoroughly considered. Accordingly, I do not think the Finance Committee’s dismissal of his work is fair or properly considered. We remain of the view that the impact of this Bill will have a positive benefit for Scotland and its people.

I also promised your Committee that we would marshal the information we have about future costs of the Bill in a more accessible manner. The attached paper ‘Water Environment and Water Services Bill – Methodology and Cost Estimates ’ does so. It also provides a description of how the figures were arrived at – essentially how WRc did their job – as the Committee suggested that this would also be useful. It makes clear, as I did in my evidence on Wednesday, that the anticipated costs of secondary legislation are included in the analysis of costs.

I reassure the Committee that there is no question of the Executive asking the Parliament to approve a bill with a blank price tag. This is an enabling Bill but we have provided as detailed a breakdown as we can of the likely future costs and benefits of the Bill as fully implemented. I can also assure the Committee that the Executive will produce a thorough regulatory impact assessment in respect of each statutory instrument made under the Bill. As I said on Wednesday though, we should also pay particular attention to the costs of not implementing the bill. Not only would it lead to a Scotland with a more degraded environment, it would seriously damage our reputation as a country of outstanding beauty with a vibrant and healthy environment. Scotland’s communities and businesses would suffer as a result.

Inevitably the cost figures we have presented represent the worse case scenario, because we have not been able to reflect the full range of flexibilities within the Bill. It is important to note that, apart from two specific sectors, WRc were not able to make any assumption about how these flexibility’s might be used in practice. Accordingly, apart from the case studies about power (hydro-electric production) and river engineering/flood defence, it is clear that the costs are likely to have been exaggerated because the opportunities for flexible implementation have not been taken into account. Although it was only for illustrative purposes, it is instructive to note that WRc considered reducing costs by 30% to account for this inability to take flexible implementation into account reasonable. Ultimately, of course, it will be for the river basin planning system to determine how the flexibilities are applied across Scotland. More information on the flexibilities I refer to is provided in Annex B.

The Committee also asked for clarification of the procedures for consideration of secondary legislation provided for by the Bill. I attach a table at Annex C that makes the position clear. I am sure the Committee will want to consider the provisions of Section 31 of the Bill at Stage 2. However, I can assure you that the Executive recognises that, in the context of an enabling Bill such as this one, it is particularly important to provide sufficient opportunities for effective Parliamentary scrutiny of secondary legislation.

The Committee is also aware (Mr Kellet’s letter of 18 September to the Clerk of the Finance Committee) that, in respect of the impact of abstraction controls, the Executive has commissioned further research. This work will supplement and develop the work done by WRc in respect of this
particular new control regime and is aimed at evaluating the economic impact of these controls on high and medium water users in Scotland. This work will inform development of the abstraction control regime as well as providing a more detailed insight into the impact of that regime. Work started on this project in November last year and is due for completion this month. We will publish the report before Parliament goes into recess in October.

I conclude by thanking the Committee again for the careful consideration they have already given to this Bill. I believe it is an important Bill for Scotland. It will provide us with a sound platform to ensure the continued protection of Scotland’s water environment for generations to come. It is a Bill that Scotland would be poorer without. I urge you to support the general principles of the Bill.

I am copying this letter to Des McNulty, Convenor of the Finance Committee.

ROSS FINNIE
Water Environment Water Services Bill – Methodology and Cost Estimates

This paper is in response to the Finance Committee Report on the Financial Memorandum for the Water Environment and Water Services (Scotland) Bill. As requested, it provides information on the process by which estimates were derived and clarifies the potential financial impact of the Bill.

Methodology

We commissioned WRc, a respected firm of environmental consultants, to research the costs and benefits of implementation of the Water Framework Directive in Scotland. The report they produced has been made public. Its conclusions formed the basis for the costs and benefits described in the financial and policy memorandums to the bill.

WRc worked in conjunction with Professor Nick Hanley, a leading academic in his field, and employed sophisticated techniques that are recommended by Government appraisal guidance. They produced the cost benefit analysis using a four stage process.

The first stage was to forecast the hypothetical case that would develop in the absence of the Directive, and then to establish the status gap in water quality that would exist between this hypothetical case and the water quality required by the Directive. The hypothetical case took into account planned changes (such as those agreed investments to be undertaken as part of the Water Industry Quality and Standards Programme), in-the-pipe-line changes (policies that are decided upon but which there is some uncertainty about such as the designation of Nitrate Vulnerable Zones) and prospective changes that are more speculative, such as future reforms of the Common Agricultural Policy. Although the best available information was used (and audited by SEPA where necessary), some assumptions also had to be made about current river quality.

The second stage was then to develop and appraise options for how the requirements of the Directive would be met most cost-effectively. This was executed by performing thirteen business case assessments in different sectors and then extrapolating from these sectors to the national level. During this stage cost estimates were derived from the best-value options.

It can be seen that estimation of costs is a complex process involving a large number of variables. Where possible, costs are presented as a range to reflect the inherent uncertainty in estimating costs over a long time horizon. Over time, and with further research, much of this uncertainty will be whittled down. However there is a limit to which it is possible to quantify these uncertainties given the information currently available. We are firmly of the view that the substantial work performed to date has given us the best cost estimates that could be available at this stage.

The third stage was to estimate the benefits that would accrue if the water quality required by the Directive is achieved. Whilst some of the more commercial benefits, in areas such as fishing and recreational activities, have known monetary values, other
benefits, particularly the aesthetic ones, do not. Where it was possible, these benefits were incorporated into the study by estimating monetary values using a ‘Willingness to Pay’ methodology. This is a well used and accepted methodology that is, again, recommended by Government appraisal guidance.

Whilst the majority of people do not intuitively recognise benefits such as improved water quality as having a monetary value, many are often willing to contribute a small financial amount to improve the appearance and condition of a local river. Individuals are willing to do so because they believe that they will benefit from the improvements, due to factors such as greater recreational opportunities, more aesthetically pleasing environment, greater natural wildlife, etc. These benefits therefore have a value to many individuals and it is this value that is represented in the cost-benefit analysis. Many of the benefits that will result from the Bill’s implementation are of this nature. And although individually they are small, when aggregated across the whole of Scotland they become significant.

Only benefits where monetary values could be attached were used in the study. This meant that many benefits we know will accrue from the Directive’s implementation were not included, due mainly to a lack of relevant data. Areas where benefits are known to occur, but could not be estimated are reduced urban run-off, improvements in groundwater quality, and improved protection for wetlands.

Finally, as Professor Nick Hanley highlighted, reducing upstream pollution helps downstream users. This is because the problems that they face as a result of dealing with the consequences of pollution are reduced. Hence there may also be benefits to many of those that will also incur costs (industry, agriculture, water authorities etc). These benefits have not been included in the study because of estimation challenges.

The fourth stage was to bring these pieces together to provide a cost-benefit analysis, and to perform sensitivity testing to establish the robustness of results.

**Direct costs of the Bill**

The only significant costs that arise directly from the Bill fall on the Scottish Environmental Protection Agency. It is estimated that in the medium term (beyond 2006) SEPA will have increased recurring costs of around £2.5m. In the short term as SEPA builds up its capacity to regulate and plan in this area extra resources will also be required. SEPA has been awarded £11m in additional funding by the Scottish Executive over the next three years to improve protection of the environment. The implementation of the Water Environment and Water Services (Scotland) Bill is one of the main priorities we have identified for this extra resource.

**Potential Additional Future Costs**

Any additional costs will only be incurred if there is a strong case for doing so – i.e. that they are not disproportionately costly. Moreover, every regulation made under the Bill will be accompanied by a thorough Regulatory Impact Assessment.

The potential costs that could occur are re-presented, broken down by sector below. They are also presented in tabular form (along with the SEPA costs) in Appendix 1. In each sector costs are only mentioned as they are incurred. If no mention is made of,
say, short term costs, this is because no significant costs are expected to arise in this time period. All costs are expressed in 2002 prices. In considering the potential future costs it is worth bearing in mind that given the Water Framework Directive is being implemented across Europe, Scottish industry should not be disadvantaged against its European competitors.

**Scottish Water**

It is estimated that in the medium term (2007-2011) Scottish Water will require to invest extra capital of £28m per year because of this Bill. In the longer term on-going costs are estimated to be £5m a year which is less than 1% of Scottish Water’s current operating costs. These costs would be incurred mainly to comply with the pollution control regime. Some of the costs would have been incurred by Scottish Water if the Bill hadn’t been introduced. It is therefore extremely challenging to derive how much additional cost is as a result of the Bill.

It is likely that Water Framework Directive led investment will be introduced during the next Strategic Charges Review period, which starts in 2006. The forthcoming Quality and Standards 3 process, which forms part of the preparation for the Charges Review, will incorporate the impact of the Directive on Scottish Water’s investment programme. This will allow the costs associated with the Bill to be fed into an overall assessment of Scottish Water’s funding requirements, and provision will be made accordingly.

**Local Authorities**

It is estimated that in the medium term (2007-2011) Local Authorities will require to spend between £8m and £20m per year on upgrading flood prevention schemes. On-going costs thereafter are expected to be minor.

**Agriculture – Dairy & Livestock**

In the vast majority of farms adherence to best practice will go a long way to mitigating problems. For these farms in the medium term (2007-2011) it is estimated that capital investment between £12m and £18m will be required. In the longer term there will be recurring costs of between £11-13m a year for this group. For those farms that will need to go beyond the generally established best practice there will be further long term recurring costs of approximately £12m a year. All these costs would arise from complying with the abstraction control regime and the need to undertake waste management planning.

**Mining**

In the medium term (2007-2011) it is estimated that capital investment between £9m and £20m per year will be required. In the longer term on-going costs are estimated to be between £4m and £10m a year. These costs would be required to comply with the pollution control regime.

**Hydro-Electric Power**
The Executive’s consultants estimated that in the longer term (beyond 2012) the on-going costs would be in the range of £10m to £15m per year. However this is very much a worse case scenario and use of the ‘heavily modified waters’ designation will ensure that there is not a disproportionate cost from the measures implemented at any scheme. These costs would fall on the owners of the hydro power schemes and would be required to comply with the abstraction and impoundment control regimes.

**Industry – Paper & Pulp**

In the medium term (2007-2011) it is estimated that a one-off capital investment of approximately £5m may be required. In the longer term on-going costs would be minor. This cost would fall on the plant owners and would be incurred to comply with the abstraction control regime.

**Contaminated Land**

There may be a need to accelerate the clean up of contaminated land. It is estimated that in the medium term (2007-2011) this would cost £5m a year with no on-going costs thereafter. It is also worth keeping in mind that much of this land would have been cleaned up anyway.

**Agriculture – Potato Growers**

It is estimated that in the longer term (beyond 2012) on-going costs to potato growers would be approximately £1.5m a year, with a possible range from £0.8m to £2.3m. These estimates are derived from a research study undertaken for us by the Macaulay Land Use Research Institute which estimated most effected farms that would experience, on average, modest reductions in gross margins. These reductions would result from complying with the abstraction control regime.

**Households**

In the medium term (2007-2011) it is estimated that capital investment of approximately £2m a year would be required. In the longer term on-going costs are estimated to be approximately £1m a year. These costs would fall on the households and commercial premises that needed to upgrade their sewage facilities. The costs would be required to comply with the pollution control regime.
### Appendix 1 – Summary of Estimated Spend (Revenue & Capital) by Sector to Comply with Water Environment & Water Services Bill

<table>
<thead>
<tr>
<th>Sector</th>
<th>Short Term Costs</th>
<th>Medium Term Costs</th>
<th>Annual Long Term Costs</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scottish Environment Protection Agency</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Scottish Water</td>
<td>28</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td>Local Authorities</td>
<td>14</td>
<td>14</td>
<td>14</td>
</tr>
<tr>
<td>Agriculture - Dairy &amp; Livestock</td>
<td>16</td>
<td>16</td>
<td>16</td>
</tr>
<tr>
<td>Mining</td>
<td>15</td>
<td>15</td>
<td>15</td>
</tr>
<tr>
<td>Hydro-Electric Power</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Industry - Paper &amp; Pulp</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contaminated Land</td>
<td>5</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>Agriculture - Potato Growers</td>
<td>2</td>
<td>2</td>
<td>2</td>
</tr>
<tr>
<td>Households</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
</tbody>
</table>

Notes:
1. All costs rounded to the nearest million
2. Where a range has been presented in the text, the mid-point has been included in the table
WATER ENVIRONMENT & WATER SERVICES (SCOTLAND) BILL

OPPORTUNITIES FOR FLEXIBLE IMPLEMENTATION

1. Section 9 of the Water Environment and Water Services (Scotland) Bill provides for the establishment of environmental objectives for each body of water in Scotland. The environmental objectives set for each water body – a stretch of river or coastal water or a loch or part of a loch – are central to the scheme established by Part 1 of the Bill. The environmental objective sets the quality target to be aimed for and therefore will be the key driver of the regulatory action under the Bill. They will consequently be the key driver of the compliance costs imposed under the Bill on water users.

2. Article 4 of the Water Framework Directive provides that the default environmental objective for each water body is ‘good ecological status’. The Executive expects that many of our waters already meet that standard but it is undoubtedly a demanding one. Accordingly, it is important that we provide ourselves with the opportunity to make use of the flexibility in the Directive to take social, economic or wider environmental considerations into account. This will be done by allowing the application of other environmental objectives where it would be unfeasible or disproportionately expensive to achieve ‘good status’. Ministers will use the regulating making power in section 9 to ensure that flexibility is available in the river basin planning process.

3. The flexibilities available are outlined below:

- **Artificial or heavily modified water bodies.** Certain water bodies may be designated as artificial or heavily modified. The designation as artificial or heavily modified allows the modified nature of the water body to be taken into account in setting the objective. Accordingly, the default environmental objective for those water bodies becomes ‘good ecological potential’ as opposed to ‘good ecological status’. In practice this designation will be used to protect valuable uses of the water environment that involve substantial modification to it. Hydro-electricity generation is the most obvious example and one that will be particularly important in Scotland. However, there are other situations, e.g. in respect of flood or coastal defences, in which this designation will also be important.

- **Extension to the deadline for achievement of environmental objectives.** The Directive provides that the environmental objective set for each body of water should be achieved by December 2015. However, it also provides that there are circumstances in which extensions to this deadline will be allowed. An extension will be possible where achievement of the objective by 2015 is not possible because of technical feasibility or because of disproportionate cost or because natural conditions make that achievement impossible. We will be able to provide that 2 extensions of the deadline, each of 6 years, are possible. For such water bodies then the ultimate deadline for achievement of the relevant environmental objective will be 2027.

- **Less stringent environmental objectives.** Environmental objectives that are less taxing than the default environment objective may be set in certain circumstances. The circumstances envisaged are where a water body is so affected by human activity or where its natural condition is such that achievement of the default objective is infeasible or disproportionately expensive.
4. While the flexibilities described above will be very important in the Scottish context it is important to be clear that there are detailed tests in respect of each of them set out in the Directive. Moreover, the use of them will require to be justified in each version of the river basin plan where they apply.

5. It is also important to be clear that the Directive does not preclude future developments - even ones that may of themselves threaten the achievement of the established environmental objective for the affected water body. In these situations, provided that the new development is of overriding public interest or that the benefit of achieving the environmental objective is outweighed by the benefit of the development to human health, safety or sustainable development, then the development may go ahead.
WATER ENVIRONMENT AND WATER SERVICES BILL

SUBORDINATE POWERS

<table>
<thead>
<tr>
<th>Provision</th>
<th>Description</th>
<th>Procedure</th>
</tr>
</thead>
</table>
| **Part 1**  
Section 2(8) – specification of responsible authorities’ functions. | Order – allows Ministers to define by order the “designated functions” that the responsible authorities are to exercise to secure compliance with the Directive's requirements. These are identified by order to allow for detailed consideration in respect of each of the authorities to be so designated and to allow for future identification of any new authorities that may be relevant. | Negative |
<p>| <strong>Section 2(8) – specification of enactments.</strong> | Order – Section 2(1) places a duty on Scottish Ministers and SEPA to exercise their functions under the relevant enactments so as to secure compliance with the requirements of the Directive. Section 2(8) provides that Part 1 of the Bill is a relevant enactment, and enables Ministers to specify by order further enactments. This is to allow for the further identification of any future enactments, conferring functions that may be relevant. | Negative |
| <strong>Section 2(8) – designation of “responsible authorities”.</strong> | Order – Section 2(8) enables Scottish Ministers to designate responsible authorities by order. This is to enable detailed consideration of the authorities to be designated, and to allow for future identification of any new authorities that may be relevant. | Negative |
| <strong>Section 4(1) - designation of river basin districts (the geographical unit upon which river basin management plans are to be based).</strong> | Order – The designation order will specify the geographical area to be included in the district by reference to a map that will accompany the order under subsection (4). It is felt to be appropriate for such geographical details and maps to be set out in secondary legislation rather than in the Bill itself. It also provides a more flexible procedure for altering the river basin district boundaries, if necessary, in the future. | Negative |
| <strong>Section 5(5) - further provision as to characterisation of river basin districts.</strong> | Regulations – enables Scottish Ministers to specify in more detail the methods, procedures and criteria by which SEPA will carry out environmental and economic characterisation of river basin districts. It is proposed that regulations made under 5(5) will also be used to specify the criteria by which bodies of water may be designated as artificial or heavily modified. These criteria are set out in Article 4(3) of the Directive. It is inappropriate to include the level of detail suggested within primary legislation. Ministers could easily amend such regulations in light of changes to the Directive's provisions or improved scientific knowledge in future. | Negative |</p>
<table>
<thead>
<tr>
<th>Section 6(1) - identification of bodies of water used for abstraction of drinking water.</th>
<th><strong>Order</strong> – requires Ministers to identify by order each body of water within river basin districts that are used or are intended to be used to supply drinking water above a threshold of 10 cubic metres a day or serve more than 50 people. It is intended that these orders will list every water body that falls within the criteria laid out. The power to make an order is required as it is inappropriate to include the necessary level of detail in the Bill itself.</th>
<th>Negative</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 7(1) - Form and content of register of protected areas.</td>
<td><strong>Regulations</strong> - Section 7 places duties on SEPA to prepare and maintain a register of protected areas for each river basin district designated under section 4. Protected areas are the bodies of water that are used or are intended to be used as drinking water sources identified under section 6 and other bodies of water given special protection in other Community legislation as specified in subsections (3) and (4). Subsection (2) enables Scottish Ministers to instruct SEPA as to the detail of the form and content of the protected area register. It is intended that these regulations will be used to specify the precise nature of the information to be provided in the register for each protected area. It is inappropriate to provide that level of detail in primary legislation. Setting out such matters in regulations will allow greater flexibility in relation to the form and content of the register in future in light of changing circumstances.</td>
<td>Negative</td>
</tr>
<tr>
<td>Section 7(5) - further provision as to identification of protected areas.</td>
<td><strong>Regulations</strong> – These regulations would specify the particular Community instruments or legislation under which the areas have been designated or identified. Section 7(5)(b) enables Scottish Ministers to specify by regulations other criteria for the identification of protected areas. This is to allow Ministers to make appropriate provision for future community legislation that requires the identification of protected areas in river basin management plans.</td>
<td>Negative</td>
</tr>
<tr>
<td>Section 8(3) - Monitoring methodology and monitoring strategy</td>
<td><strong>Regulations</strong> – Section 8 places duties on SEPA to secure the carrying out of monitoring by other authorities, of the status of bodies of water in river basin districts. Section 8(3) enables Ministers to make regulations concerning the monitoring methods and data analysis to be used. These regulations would set out the detailed technical requirements for monitoring specified in Annex V of the Directive. These regulations could also be used to specify other authorities that are to be responsible for monitoring water status and the form in which they are to transmit information to SEPA, and as to consultation and other procedure connected to the preparation of the strategy. Section 31(3) provides that regulations made under Section 8(3) may modify any enactments. Affirmative procedure must be used where any such</td>
<td>Negative (affirmative if textually amending Acts)</td>
</tr>
</tbody>
</table>
annex c

sections 9(3) - determining and achieving the environmental objectives

regulations – section 9 places a duty on SEPA to determine the environmental objectives that are to be achieved for every body of water in the river basin districts designated under section 4. section 9(3) enables ministers to make regulations that will instruct SEPA as to how this will be carried out. it is intended that these regulations will set out the requirements of article 4(1) of the directive in relation to the basic objectives for surface and ground water in river basin districts and the detailed specifications in annex v as to the determination of water status. the power to make regulations is required because it is inappropriate to include this level of detail in the bill. regulations may also be amended more quickly and easily than primary legislation should this be necessary, for example, as a result of emerging guidance and legal opinion from the european commission and courts.

sections 10(2)(b) - specification of matters to be included in RBMPs.

regulations – section 10(2)(b) enables the scottish ministers to make regulations to specify the matters that are to be included in the plans, to supplement the matters already set out in schedule 1. the approach adopted ensures that part 1 of the schedule covers each of the main heads of part a of annex vii of the directive, leaving the details for regulations. if all of the requirements of the annex were listed we would also have to import a long list of definitions of various defined concepts used. we consider that this level of detail is better left to regulations.

sections 19(1) - general regulation making power in relation to river basin management planning.

regulations – enables ministers to make regulations to specify various details in connection with the operation of river basin management planning in practice. they will cover the form and content of river basin management plans and the sub basin plans provided for in section 15, any additional matters to be taken into account in preparing these plans and details of procedure to be followed for preparation, submission, approval, review or modification. these regulations may be used, for example, to provide detailed instruction on participation by interested parties in river basin management planning or the preparation of sub basin plans.

sections 20(1) - the regulation of controlled activities.

regulations – enables ministers to make regulation, for or in connection with regulating any activity for the purposes of protecting the water environment. it is intended that this power will enable ministers to implement the detailed requirements of article 11 of the directive and more generally to enable them to protect the water environment. article 11 of the...
Directive describes the mechanisms which member states must put in place to deliver the environmental objectives for bodies of water set out in the river basin management plans. These include, for example, abstraction controls and controls on water pollution. Regulation making powers will be used to control activities liable to cause pollution to surface water or ground water, abstraction, impoundment and engineering works. This will enable the detail of how the new control regimes will work to be developed over time and in accordance with any further guidance issued by the European Commission. Moreover, it is appropriate that a number of new control regimes will be established, and it would be inappropriate to include that level of detail in the Bill.

<table>
<thead>
<tr>
<th>Section</th>
<th>Title</th>
<th>Regulations</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>22(1)</td>
<td>remedial and restoration measures</td>
<td>It may be necessary to take remedial or restoration measures in order to meet the environmental objectives that are set out in river basin management plans. This section gives Ministers the power to give SEPA or any responsible authority the function of undertaking remedial or restoration measures. Ministers may also make provision for determining what other persons should bear responsibility for such measures and allow SEPA or a responsible authority to either serve notices on the persons so identified requiring them to carry out the works themselves, or to arrange to have the works undertaken and recover the costs from the person so identified.</td>
<td>Negative</td>
</tr>
<tr>
<td>23(1)</td>
<td>fixing of charges for water services</td>
<td>enables Ministers to make regulations in connection with charges for water services. This will enable Ministers to implement Article 9 of the Directive. Section 31 (3) provides that these regulations may modify other enactments, for example, if there was a need to modify the statute that specified the functions of an authority that charged for water services. Providing for these matters to be specified in regulation is to enable the details of how such charging should be provided for to be developed over time, taking guidance being developed at European level into account. The level of detail that may need to be specified is also more appropriate in subordinate legislation.</td>
<td>Negative or affirmative (but must be affirmative if textually amending Acts)</td>
</tr>
<tr>
<td>24(1)</td>
<td>power to give effect to Community Obligations</td>
<td>enables Ministers to modify any of the water environment provisions in the Bill in order to give effect to any community obligations. The reason for providing for this power is to allow for the possibility that new Community legislation may be enacted that is best implemented by amending relevant provisions of the Bill. This is appropriate for subordinate legislation because of the level of detail that may be involved.</td>
<td>Negative</td>
</tr>
<tr>
<td>26(2)</td>
<td>subsection</td>
<td>enables Ministers to make regulations determining reasonable cost for the purposes of section 1 (duty of Scottish Water to provide for sewerage) of the 1968 Act. New</td>
<td>Negative</td>
</tr>
<tr>
<td>(3B) inserted into section 1 of the 1968 Act</td>
<td>Definition of reasonable cost.</td>
<td>subsection (3C) to that section sets out particular matters which the regulations may make provision for, and that the regulations may different provision for different types of case. These regulations will allow the costs that Scottish Water should incur, or the contribution which it would make, to facilitate a new connection to a sewerage main to be determined. This is appropriate for subordinate legislation due to the level of detail that will be involved.</td>
<td>Negative</td>
</tr>
<tr>
<td>Section 26(7) (subsection (2C) inserted into section 6 of the 1980 Act) - power to make regulations determining reasonable cost.</td>
<td>Regulations – enables Ministers to make regulations determining reasonable cost for the purposes of section 6 (duty of Scottish Water to provide supply) of the 1980 Act and new subsection (2D) to that section sets out particular matters which the regulations may make provision for, and that regulations may make different provision for different types of case. This is appropriate for subordinate legislation due to the level of detail that will be involved.</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Section 27(3) (subsection (1) of section 14A inserted into 1968 Act) - specifying construction standards.</td>
<td>Regulations – enables Ministers to set out the construction standards for a private sewage treatment works which must be met for it to vest in Scottish Water, as provided in new section 8(1A)(a), or to connect to Scottish Water's sewers or drains, as provided in new section 12(2A)(a). These regulations will ensure that infrastructure constructed by third parties reaches the same standards as that constructed by Scottish Water. The standards concerned will be detailed and subject to revision and so are appropriate for subordinate legislation.</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Section 27(3) (subsection (3) of section 14B inserted into 1968 Act) - provision as to takeover conditions and connection agreements.</td>
<td>Regulations – New section 14B of the 1968 Act provides further detail on connection agreements and take-over conditions, including this regulation making power. Regulations will be able to detail the provision which a connection agreement or take-over conditions should include to comply with sections 14B(1) and (2), e.g. how to determine the sum which should be paid by Scottish Water to the person providing the works in respect of their construction. The standards concerned will be detailed and subject to revision and so are appropriate for subordinate legislation.</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Section 28 (subsection (1) of section 23B inserted into 1980 Act) - specifying construction standards.</td>
<td>Regulations – this inserts a similar power relating to water mains in the 1980 Act, as that relating to construction standards for sewers, drains and sewage treatment works inserted in the 1968 Act by section 27(3) of the Bill. This will ensure that mains laid by other persons are the same standard as those laid by Scottish Water to allow them to vest in Scottish Water. The level of detail involved makes this appropriate for subordinate legislation.</td>
<td>Negative</td>
<td></td>
</tr>
<tr>
<td>Section 28 (subsection (2) of section 23C inserted</td>
<td>Regulations – enables Ministers to determine the provisions to be included as vesting conditions in an agreement under new Section 23A(7) to the 1980 Act. New section 23C(1)</td>
<td>Negative</td>
<td></td>
</tr>
</tbody>
</table>
of the 1980 Act sets out that vesting conditions can include a sum to be paid by Scottish Water to the person who laid the main in respect of its laying, and the liability of the person who laid the main to pay Scottish Water in respect of various costs. Regulations will specify how to determine the vesting conditions, and cases where section 23C(1) does not apply or only applies with modifications, and the regulations may make different provision for different types of cases. The level of detail involved makes this appropriate for subordinate legislation.

| Part 3 Section 32 - ancillary provision | Order – enables Ministers to make incidental, supplemental, consequential, transitional, transitory or saving provisions that are necessary for the purposes of the Act. This could include the amendment of existing enactments. An order making provision in this respect is appropriate here because some of the transitional provision and consequential changes to existing legislation could be detailed and are more appropriately dealt with off the face of the Bill. | Negative (affirmative if textually amending Acts) |
| Section 33(1) commencement | Order – provides that the substantive provisions of the Act will come into force on such date as is appointed by the Scottish Ministers by order made by statutory instrument. Any such order would not be subject to Parliamentary procedure. This is a standard commencement provision. | None |
WATER ENVIRONMENT AND
WATER SERVICES BILL

CASE STUDIES

Scottish Environment Protection Agency
September 2002
INTRODUCTION

The Water Environment and Water Services Bill will promote legislation to allow the achievement of national environmental priorities and be the enabling legislation for transposing the Water Framework Directive. It will therefore play a key role in shaping the way the water environment will be managed in Scotland. SEPA believes that the Water Bill will enable the delivery of measurable environmental improvements to Scotland’s waters in a targeted and cost-effective way.

This report has been produced by SEPA to illustrate how the new control regimes proposed under the Bill could help protect the environment. For each new regime - abstractions and impoundments, river engineering and diffuse pollution – a number of case studies describe circumstances where SEPA believes significant environmental harm has been, or is being, caused but where existing controls are insufficient to protect the environment.

The case studies also consider how the new regimes proposed in the Water Bill might allow similar activities to be undertaken in the future without similar harmful environmental impacts.

Please note that the case studies used are purely for illustrative purposes and represent situations that are occurring throughout Scotland. The focus is therefore on types of issues involved. No significance whatsoever attaches to the choice made of the particular examples, nor do they imply any wrongdoing on the part of individuals or organisations under current environmental legislation.
## CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Executive summary</td>
<td>4</td>
</tr>
<tr>
<td>Abstractions and Impoundments in Scotland</td>
<td>6</td>
</tr>
<tr>
<td>Abstractions for public water supply – Noddsdale Water, North Ayrshire</td>
<td>9</td>
</tr>
<tr>
<td>Abstractions for agriculture and irrigation – small watercourses in Angus</td>
<td>13</td>
</tr>
<tr>
<td>Abstractions for hydropower generation – Glascarnoch, Ross-shire</td>
<td>18</td>
</tr>
<tr>
<td>Abstractions for aquaculture – Fish farm, Scottish East Coast</td>
<td>24</td>
</tr>
<tr>
<td>River Engineering in Scotland</td>
<td>29</td>
</tr>
<tr>
<td>River channel modification – the River Eden, Fife</td>
<td>32</td>
</tr>
<tr>
<td>Channel re-profiling – the River Mudale, Caithness &amp; Sutherland</td>
<td>37</td>
</tr>
<tr>
<td>Diffuse Pollution in Scotland</td>
<td>41</td>
</tr>
<tr>
<td>Nutrient inputs from agriculture – River Eden, Fife</td>
<td>46</td>
</tr>
<tr>
<td>Nutrient diffuse pollution – the Leet Water, Scottish Borders</td>
<td>50</td>
</tr>
</tbody>
</table>
EXECUTIVE SUMMARY

The Water Environment and Water Services Bill (Water Bill) transposes the requirements of the Water Framework Directive (WFD) into Scottish law and promotes wider national policies for environmental protection in Scotland.

The aim of the Water Bill and the WFD is to protect and restore, where possible, the ecological status of the water environment. Through a new, open, transparent and participative process, the River Basin Management Plan will set the environment objectives and draw up a cost-effective programme of measures needed to secure them. The proposed new regulatory regimes will contribute to ensuring that these objectives can be met.

SEPA believes that the new regulatory regimes are required to protect the environment. To illustrate why, this report contains case studies of a range of activities across Scotland that have caused or are continuing to cause environmental harm. The case studies are intended to illustrate generic problems found in Scotland and go on to indicate the kind of controls and mitigation measures that SEPA considers may be appropriate in each case once the new regimes are in force.

In order to ensure that the burden of these new regimes is minimised, the Bill sets out a suite of controls ranging from simple registration to general binding rules and full water use licences, allowing the most appropriate level of regulation to be applied in relation to the environmental risk each activity poses.

The proposed control regimes include:

- A replacement for the existing **point source discharge** consenting system set up under the Control of Pollution Act (COPA) 1974. As comprehensive controls have been put in place for over 20 years, SEPA has not produced any case studies on point source pollution.

- Controls on **abstraction and impoundment** are needed to deal with the environmental impacts caused by reductions in flow during droughts, a lack of dilution for polluting discharges and the physical modifications of dams and intake structures.

  It is anticipated that the great majority of small private abstractions will only require simple registration, with water use licences being used to manage significant abstractions and most impoundments.

- Controls on **engineering operations** need to be flexible enough to cover the many different types of activities that can have an impact on the physical quality of aquatic habitats. The main environmental impacts are due to the disturbance of the natural sediment processes, alterations to the physical structure of the stream bed or banks, modifications to the flow velocity and/or depth of water and restrictions on the movement of migrating species.
The engineering case studies have been selected to try to illustrate this diversity and to highlight that the degree of impact has as much to do with the sensitivity of the habitat as with the scale of the engineering operation. SEPA believes that a combination of general binding rules covering good practice will suffice for most engineering operations, with full licencing used only for major schemes that carry specific environmental risks.

The WFD requires controls on engineering operations that may affect tidal and coastal waters too, but these will continue to be dealt with by the Scottish Executive under the Food & Environment Protection Act (FEPA) and so are not covered here.

- The measures used to reduce **diffuse pollution** will need to reflect the different kinds of activity that can be the cause of the problem. Diffuse pollution is chronic in nature in that it affects water quality via a large number of individually small inputs spread over a wide area. This means it can be more difficult to demonstrate that a specific action has had a specific effect, although there is clear evidence that the combined impact on the water environment can be significant.

SEPA believes that the best way to control diffuse pollution is via the use of statutory general binding rules that will define the best practice for a range of activities. These are likely to be based on existing voluntary codes such as the Sustainable Urban Drainage Systems (SUDS) Manual or the PEPFAA code for agriculture. Due to a general acceptance of the concept of sustainable urban drainage in Scotland, SEPA has not felt it necessary to produce a specific case study on diffuse pollution from urban sources but further information on this topic is available from SEPA if required.

SEPA believes that the Water Bill provides an opportunity both to improve the water environment in Scotland and to rationalise the regulation of a wide range of activities into a flexible and consistent framework. The measures included in the Bill offer the means to protect and enhance the environment in a proportionate manner by tailoring the scale of regulation to the environmental risk an activity carries.

As the proposed lead authority, SEPA welcomes this opportunity and recognises that partnership working with many other organisations will be needed to deliver these objectives.
ABSTRACTIONS AND IMPOUNDMENTS IN SCOTLAND

Introduction
There are presently an estimated forty to fifty thousand abstractions and between five and ten thousand impoundments in Scotland. The majority of these abstractions are small private water supplies but substantial volumes are abstracted for public drinking water supply, hydro-electricity generation and a range of industries such as whisky distilling, aquaculture, agriculture and opencast mining.

Scotland is a relatively water-rich country with an average annual rainfall of around 1400mm, but this average can mask significant variations both regionally and year on year. Some areas on the east coast receive an average of just 800 mm per year, similar to the English Midlands, and much less than this in dry years. This can lead to over-abstraction at certain times of year in some areas. In some cases, the impacts are clear and continuous, while in others the over abstraction may seem to be just a short term problem. However, it is important to appreciate that even a relatively short term loss of flow can cause long term environmental impacts and persistently impoverished ecological communities.

Abstractions
The main environmental impacts to a river, loch or estuary that can be caused by abstraction come from changes to water level or depth, flow velocity and water quality.

Different water bodies will be sensitive to changes in some or all of these factors to varying degrees and at different times of year. This sensitivity varies with the characteristics of the water body and the ecology that it supports. For example, the marginal vegetation around the shoreline of a loch and gravel beds used by spawning salmon are both susceptible to changes in water level while many deeper lowland rivers are much less affected by changes in water level.

Controls on abstraction and impoundment therefore need to be able to take account of the environmental factors that are most important across the full range of aquatic ecology in Scotland.

Impoundments
Impoundments can have the same impacts as outlined above for abstractions plus a few specific ones of their own. These specific impacts stem from the construction of a physical barrier that can cause major modifications to the environment above and below the dam. This is often so significant that it completely replaces one type of environment with another, i.e. to form a loch where there had previously been a river.

The creation of a physical barrier can also isolate parts of a river network from each other. This isolation may stop movement of aquatic species and important sediments, such as gravels. It can also disrupt the upstream migration of species and prevent the completion of their life cycle, such as with salmon and eels.

Major impoundments will almost inevitably have such a significant environmental impact that the status of a water body will be changed. For these circumstances, new regulations need to allow for a detailed assessment of the environmental, social and
economic costs and benefits. The WFD does allow derogations (exceptions to the normal controls) to be made where schemes provide important benefits that cannot be achieved through other means. Major public water supply and hydropower schemes are obvious candidates for derogation but there may be others.

Current Controls and Legislation
For some new abstraction and impoundment schemes, SEPA has a role as a statutory consultee in the planning process as set out in the Town and Country Planning (Scotland) Act 1997 and may be consulted by Local Authorities on a non statutory basis for some other proposals. SEPA is also a statutory consultee when a proposal falls under the provisions of the Environmental Impact Assessment (EIA) (Scotland) Regulations 1999. These give SEPA an opportunity to suggest conditions to the planning authority that may be applied to the location, design and operation of new schemes.

Beyond the planning system, there are a number of pieces of legislation that cover specific types of use or economic sectors:

- the Natural Heritage (Scotland) Act 1991 for irrigation.
- the Electricity Act 1989 for hydro-electric power.
- the Water (Scotland) Act 1980 for public water supply.

While three of the case studies look at affected sites which are covered by these Acts, it should be remembered that most existing abstractions are not controlled by any legislation other than those restrictions provided under common law. Common law is only concerned with protecting the rights of other water users and there is no consideration of any potential impact on environmental quality. Under common law:

- Where groundwater is present, the owner of the land in which the borehole is situated has rights to take water and use it as they wish.
- Where groundwater is part of an underground stream, the owner of the land does not have exclusive property rights to water lying under their land, but can abstract as much as they wish so long as they do not affect another land owner’s rights.
- For surface water, a riparian owner is entitled to make use of water in a watercourse flowing though his land provided it is returned unpolluted and in the same quantity at or above the point where the watercourse leaves their land. This means that all the water in a watercourse could be taken, leaving long stretches of river affected by low or zero flows before any water is returned.
- Where water is consumed for primary purposes, such as for domestic supplies and certain agricultural activities, then the landowner can effectively take everything with no obligation to return any water.

Even these limited common law restrictions would only be applied where there is a dispute between competing interests. In many cases, the landowner can abstract unlimited quantities of water so long as there is no challenge from the downstream landowner. Even where they are applied, these conditions can still result in water resources being over abstracted.

Taken together, SEPA believe that the current measures for controlling abstraction and impoundment are insufficient to adequately protect the environment.
The Water Environment and Water Services Bill & the Water Framework Directive

The Water Bill has been drafted by the Executive to enact the requirements of the Water Framework Directive and to support other national environmental objectives. For abstraction and impoundment, the WFD contains some ‘basic measures’ that all member states must put in place.

These basic measures include controls over abstraction from surface and groundwaters in order to help achieve the environmental objectives set out in the River Basin Management Plan. These controls must be in the form of a register alongside prior authorisation or licensing, although exemptions may be granted where there are no significant impacts on water status. The Directive has identified the need for controls to ensure the prevention of further deterioration of, or the restoration of historically damaged, aquatic ecosystems. This can be done through:

- controls on the amount of water which can be abstracted or diverted to leave sufficient volumes for the waterbody to maintain biodiversity.
- the protection of natural flow variability.
- the promotion of sustainable water use based on long-term protection of available resources.

By maintaining a clear focus on the desired outcome of good ecological status, the WFD recognises that abstraction/impoundment impacts on the aquatic environment extend beyond the potential for the dilution of pollutants. SEPA welcomes the proposals for a single integrated system for abstraction and impoundment management and the opportunity for significant environmental improvement that the Water Environment Bill offers.

SEPA believes that the flexible nature of the proposed regulatory tools (registration, General Binding Rules, licences and management agreements) will allow the most appropriate level of control to be set in line with the potential environmental impact of a specific activity. As the proposed regulatory authority for these controls, SEPA is intending to work with abstractors to identify where different types of control may be needed, and so give as much time as possible for abstractors to plan any investment which may be required.
Abstractions for Public Water Supply

CASE STUDY: NODDSDALE WATER, NORTH AYRSHERE

The publicly owned Water Authority that is currently responsible for most domestic and industrial water supply is one of the largest abstractors of water in Scotland. The creation of Scottish Water (SW) earlier this year means that this new single Authority will abstract an average of over 2,400 million litres per day.

Society's need for a safe and reliable water supply is essential for both public health and economic reasons and so any environmental objectives which might affect this supply need to be considered in conjunction with these other priorities.

Background to the case study

Noddsdale Water rises to the north and west of North Burnt Hill and flows down into the Firth of Clyde at Largs, North Ayrshire. The impounded catchment is around 28km² with the predominant land use being open moorland with some farming near the river.

Outerwards Reservoir provides water to Castlehill Water Treatment Works, which supplies approximately 12,000 people in the area around Largs (an average supply of 7.69 Ml/d during 2000-2001). For most years, Outerwards can supply the majority of this water but in very dry years the yield has been estimated by SW to be just 2.27 Ml/d.

This shortfall in supply is made up by pumping in additional water from the Loch Thom complex, situated to the north, into the reservoir. This pumping is not constant and occurs when the level of the Outerwards Reservoir drops, primarily during the spring and summer months.

The location of the main ecological impacts on Noddsdale Water (Grid Ref: NS 229 651).
Environmental Impact

As the reservoir is small, fluctuations in the weather and the operation of the reservoir have a significant effect on the flows downstream of the dam. During dry weather, the river directly below the reservoir dries up leaving only small fragmented pools (see photo). This can have serious effects on the hydromorphology, ecology and water quality of the river environment.

![View of Noddsdale Water looking upstream towards Outerwards Reservoir showing fragmented pools](image)

As the environmental impacts of the reservoir have not been regulated in the past, very little monitoring has taken place on the Noddsdale. However, from the site visits which have taken place, SEPA considers that it is very likely that the some or all of the following ecological impacts may be occurring below Outerwards Reservoir:

- A sustained artificial flow regime downstream of the reservoir can result in flows that are more extreme in duration and magnitude than natural conditions. These impose intolerable stresses on many aquatic plants and animals, and also deprive the river of important dynamic processes that create habitats. Extreme low flows can cause alterations in the structure and condition of the riparian zone, affecting the bankside vegetation and its supporting ecosystem.

- The absence of flow and disconnected pools disturb the river continuity, affecting the migration of aquatic organisms and sediment transport. This can lead to increased predation and competition for nutrients and space within the remaining water, and can result in a shift in the age structure of fish communities.

- Low flows and discontinuous pools are subject to increased temperature and salinity levels, affecting oxygen availability and pH. Water temperature is critical for fish and other organisms, as it affects respiration, growth and reproduction.

- Low flows or fragmented pools within a river allow the build up of sediment to occur, altering the substrate and hence also the type of aquatic habitats.
• A reduction in channel width, depth and cross sectional area leads to an alteration in stream habitat and plant growth within the channel. As flows fall, aquatic organisms at the stream edge may become stranded or suffer desiccation, and bankside plants will be affected by the lack of moisture.

• Low volumes of water reduce the dilution capacity of the river. This could result in a water quality issue that would directly affect aquatic organisms. If this coincides with an increase in the proportion of organic matter, bacterial growth and reduced oxygen levels may be expected.

• The dam itself does not have a fish pass, so even when there is some flow the burns above the dam are isolated from the rest of the river network.

**Current Controls & Legislation**

The Water (Scotland) Act 1980 confers on Water Authorities the ability to acquire rights to abstract water from any stream or other source, but only where the Scottish Ministers have made an order approving it. The Water Authority must apply to the Scottish Ministers for the order, which may contain any extra provisions that Ministers think necessary.

There is a Water Order covering the Noddsdale Water Aqueduct that was granted in 1972, eight years before the 1980 Act. The existing Order sets limits on the volume of water that can be abstracted from a number of burns that are tributaries of the Noddsdale but the Order does not set any limits or controls on the operation of Outerwards Reservoir itself. There are many Private Bills and Water Orders in Scotland that grant water rights and which predate the 1980 Act.

The issue of low flows below Outerwards Reservoir has been raised by SEPA with West of Scotland Water Authority (WoSWA) in the past. WoSWA were not able to agree to the voluntary provision of a compensation flow, as they believed investment would be required to allow this to happen. Powers to enable the setting of a statutory requirement for compensation would make it easier for SW to justify any investment under the industry’s current financing arrangements.

Of course, there are many good examples of where the appropriate controls have been included in Water Orders, and this may suggest that the current legislation could be used to implement the requirements of the WFD. However, there is no facility under the existing legislation to review and amend any Water Order. This is a specific requirement of the Directive. SEPA welcomes the proposed powers in the Water Environment Bill to allow the review all authorisations where environmental damage is being caused.

It should also be noted that SW have indicated that they believe they have locations where excessive compensation releases have been set in the past. These were based on the need to support activities that no longer take place, such as for milling rights. These releases may serve no environmental purpose but there is no way to review these controls either.

**Possible mitigation measures under the WFD**

Under the terms of the WFD, Noddsdale Water will probably be classified as a Heavily Modified Water Body (HMWB). This means that the objective would be to achieve ‘good ecological potential’. This is the best status that can be achieved, consistent with the
reasonable operation of the existing public water supply scheme. Under these circumstances, it is likely that some form of compensation release would be required.

Releasing water from the reservoir for environmental reasons is likely to have some impact on the amount of water available for public supply during dry weather. It might be possible for this loss to be accommodated by bringing water into the area from other existing sources, such as additional Thom system water. This option may require investment in new or upgraded treatment and distribution capacity.

Another option might be to reduce the demands for water in the area served by the source through more active leakage control measures. This may require increased investment in renewing old mains, in reducing pressures within the distribution network or in proactive leakage detection and repair.

If none of these options are viable, or are not sufficient, it may be necessary to develop a new resource to make up any remaining shortfall. Whilst even a sensitively sited and well-designed new scheme may have some environmental impacts of its own, such a development may allow an overall environmental gain to be delivered.

The WFD does allows for some limited derogations from these requirements where it is not possible, or prohibitively expensive, to achieve good ecological potential. The process for assessing a potential derogation would require a detailed environmental and economic appraisal of all options.

The isolation of the upland burns caused by the dam being a barrier to movement and migration of species along the watercourse is also an issue. It may be possible to include a fish pass for a new dam but with older dams they can be prohibitively expensive to retrofit. Where there may be a potentially major environmental gain from constructing a fish pass then an in depth study would be needed to look at the justification of such a significant investment.

On the Noddsdale, SEPA would want to gather more information to enable a fully informed decision to be taken, but it seems likely that some form of compensation flow would be sought.
Abstractions for Agriculture and Irrigation

Case study: SMALL WATERCOURSES IN ANGUS

Although Scotland is a water-rich country, with an average annual rainfall of around 1400mm, over-abstraction by farmers can cause significant environmental impacts at certain locations and at certain times.

These abstractions, especially when seen individually, seem fairly small and so might not appear to be capable of causing much of an environmental impact. However, the abstractions can be highly significant when compared to the flows in the small burns and streams from where the water is being taken. Additionally, when a number of small abstractions are taken together they can have a major impact within a catchment.

Background to the Case Study

Abstraction for irrigation has become an increasing problem since the 1980’s due to the development of the mobile hose-reel irrigation unit. The ease of use of this equipment, together with its highly mobile nature, has led to a large number of small streams coming under pressure. Potato production in particular gives rise to a large demand for water and this can lead to local over-abstraction. The majority of arable farming in Scotland takes place in East Lothian, Fife and Angus all of which have relatively low rainfall and high soil moisture deficits in summer.

In 1999, around 27,000 hectares of potatoes were planted in Scotland. Nationally, 35% of this land was irrigated but in East Lothian, this proportion was much higher at 65%. During past dry periods, the flow in small streams surrounding potato fields is often not enough to support the use of these irrigation units. This can result in some farmers damming the stream to store enough water to use irrigation units effectively, or taking a significant proportion of water in the burn.

This can cause very damaging downstream impacts such as the complete drying up of burns and / or the creation of discontinuous pools of water and this can lead to serious degradation of the local ecology. Many aquatic species are likely to be under natural stress during dry weather and this is when demand for irrigation is also highest.

Environmental Impacts

Dried up stretches of river downstream of abstractions can have a direct impact on plants and animals through desiccation or from being left stranded in pools. There are also indirect impacts such as preventing the movement and migration of species within the watercourse.

Abstractions for irrigation have caused significant consequences for the ecology and quality of the aquatic environment on a number of burns. These impacts become progressively more severe with the length of time the flow in the burn is reduced. As a burn dries up, water in the soil evaporates which affects both in-stream and bankside vegetation and whole habitats can be impoverished or lost and, while these incidents may seem short lived, the impacts can continue for many months or years after normal flow has returned.

There are instances where farmers have constructed dams and sluice gates across small streams so that water can be stored for irrigation purposes. When these dams are
in operation and the sluice gates closed, there is zero flow downstream of the dam. This can result in stretches of several hundred metres of river being completely dry.

Habitats can also be damaged or destroyed due to flooding upstream of the dam as the vegetation on the banks become swamped and species that are not adapted to the relatively cooler and deeper waters begin to suffer.

Sediment movement can also be affected by dams and by a reduction in flows downstream. Sediments can build up behind the closed sluice gate and when it is re-opened, much of this silt remains. This can alter the natural riparian vegetation and its associated habitats. Also, when a sluice gate is finally opened there may be a surge of sediment downstream as flow is restored. This flush of highly turbid water can temporarily reduce dissolved oxygen and light levels needed by in-stream biota.

The reduction in flows in rivers and streams caused by irrigation abstraction and impoundment can adversely affect the dilution capacity of the stream and this can lead to deterioration in water quality. If the concentration of organic matter is increased by the reduction in flow, bacterial growth may be enhanced and reduce oxygen levels. This impact can be intensified during warm summers as the natural increase in water temperature also reduces dissolved oxygen levels. The combination of low flows, reduced oxygen levels and poor water quality can significantly affect aquatic species for long stretches downstream.

The problem of over-abstraction for irrigation in Angus has become so severe in recent years that SEPA has begun the process of making an application for a Control Order to cover the rivers draining to the Firth of Tay and the North Sea between east Dundee and Arbroath. The area is largely fertile coastal plain and so is mostly under intensive arable cultivation.

A total of six burns are proposed within the Control Order, and these are mainly used to provide water for potato irrigation.
The table below shows the total possible abstraction volumes from each burn compared to its catchment area and Q95 flow. The Q95 flow is the flow rate that is exceeded for 95% of the time and is generally regarded as the minimum for an environmentally acceptable flow.

<table>
<thead>
<tr>
<th>Catchment</th>
<th>Catchment area (km²)</th>
<th>Nr. of possible abstractions</th>
<th>Total potential abstraction (litres/s)</th>
<th>Q95 Flow (litres/s)</th>
<th>Q95 - total possible abstractions (litres/s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Buddon Burn</td>
<td>18</td>
<td>6</td>
<td>70</td>
<td>15</td>
<td>-55</td>
</tr>
<tr>
<td>Pitairlie Burn</td>
<td>23</td>
<td>10</td>
<td>50</td>
<td>18.2</td>
<td>-31.8</td>
</tr>
<tr>
<td>Lochty Burn</td>
<td>5</td>
<td>2</td>
<td>30</td>
<td>30.6</td>
<td>-0.6</td>
</tr>
<tr>
<td>Craigmill Burn</td>
<td>29</td>
<td>7</td>
<td>70</td>
<td>20</td>
<td>-50</td>
</tr>
<tr>
<td>Dowrie Water</td>
<td>7</td>
<td>6</td>
<td>10</td>
<td>26.5</td>
<td>16.5</td>
</tr>
<tr>
<td>Elliot Water</td>
<td>37</td>
<td>14</td>
<td>110</td>
<td>51.1</td>
<td>-58.9</td>
</tr>
</tbody>
</table>

By comparing the total possible abstractions with the Q95 flow, it can be seen that if all possible abstractions were utilised, five out of the six burns would be severely affected and could potentially dry up completely. This is also illustrated by the data for May through September 1995 (see the graph below) where all four burns showed significantly reduced flows and on two occasions they completely disappeared.

Biological sampling was undertaken throughout this period and all the watercourses showed a general trend of good quality at the top of the catchment deteriorating downstream. A reduction of habitat quality was also identified, with a total loss of fauna when the burn dried out completely. A decrease in the flow velocity was also noted,
leading to increased siltation and loss of scouring effects that had impacts on invertebrates and plant communities.

There are many household septic tank inputs throughout the coastal area and lack of dilution caused filamentous algae growth in these periods of very low flow during the summer of 1995. The algal growth causes a reduction in oxygen that can affect aquatic organisms, their habitats and the whole food chain. The algae also block out light for aquatic organisms increasing their stress. The combination of algae and low flows encourages sediment accumulation, again altering habitats.

Although these burns are small, they are important habitats for wildlife. In particular, for bats and insectivorous birds that rely on the normally predictable seasonal flights of adult insects from the burns, and for fish-eating birds and mammals that are dependent on healthy and abundant fish populations.

Currently, these burns are still not covered by a Control Order. This means the only practical control that exists for agricultural abstractions are those recognised under common law. A riparian owner has a right to take water from a river/stream to use for irrigation, but only if no other riparian owner’s interests are infringed. There are no environmental controls under common law and SEPA can only attempt to persuade farmers, through discussion and raising environmental awareness about the impacts that farming practices can have, and how these may be reduced.

Current Controls and Regulation
Abstraction of water for commercial irrigation purposes is only subject to licensing where Control Areas have been established under the Natural Heritage (Scotland) Act 1991. SEPA can apply to the Scottish Executive for a Control Order so that all irrigation (and any other commercial, agricultural or horticultural) abstractions within the area designated by the order must be licensed.

Only two small Control Areas currently exist in Scotland and these cover the West Peffer Burn in East Lothian and the Ordie Burn in Perthshire.
The Natural Heritage (Scotland) Act 1991 was not designed to cover all agricultural abstractions and so is not well suited to meeting the requirements of the Directive. Even if Control Orders were set up for all catchments, this would only cover the management of abstractions in catchment dominated by agriculture and so separate systems for other types of abstractors would still be needed. SEPA believes the Water Environment Bill’s proposals for a single, integrated system for abstraction management offer the most efficient and effective option.

**Possible mitigation measures under WFD**

There are a number of possible measures that SEPA might wish to promote under any new regulations. These would be aimed at making sure those farmers who use irrigation equipment are employing ‘best practice’ methods.

This would mean maintaining a residual compensation flow in watercourses at all times. This could be achieved through helping farmers work together so that their operations were not happening from the same stream at the same time. By staggering abstractions, it may be possible to maintain environmentally acceptable flows without major impacts on overall abstraction. Where this was not possible, farmers may be able to provide their own storage, properly sited and designed, so that irrigation could continue during periods of low flow.

In all cases, SEPA would aim to ensure that the legitimate rights of abstractors are respected, but real environmental improvements will depend on an efficient and effective set of regulations being implemented.

In this case, SEPA would want to investigate with local farmers the potential for a joint management agreement. This could allow farmers to continue abstraction at, or near, current levels so long as the timing was managed to avoid concurrent use by too many farmers at any one time. This would be a statutory agreement, enforceable by SEPA, and could be backed up by individual licences for the more significant abstractions.
Abstractions for Hydropower Generation

CASE STUDY: GLASCARNOCH, ROSS-SHIRE

Hydropower generation, and other renewable energy sources, can bring significant environmental benefits, particularly in terms of the reduced carbon dioxide (CO₂) emissions that may result from replacing fossil fuel sources. There may also be nationally and locally important economic and social benefits associated with such schemes. In principle, SEPA wishes to support proposals for sensitively sited and well-designed schemes.

However, these benefits should not hide the fact that watercourses being used for hydropower generation may be subject to very significant ecological impacts. SEPA believes that a balance needs to be found between maximising the economic and atmospheric pollution benefits and the protection of river ecology.

Background to the case study

Loch Glascarnoch (Figure 1) is completely artificial and was formed by the damming of the Glascarnoch River for the purpose of hydroelectric generation in 1957. The loch is impounded by a dam 510m wide X 28m high, and a tunnel carries water from the Loch to the Mossford power station on Loch Luichart. This loch forms an important part of the larger Conon scheme that is operated by Scottish and Southern Electric (SSE).

The Glascarnoch catchment has been heavily engineered for hydroelectric power generation. There has been a major hydrological impact on the Glascarnoch River caused by the Loch Glascarnoch dam. There is no compensation flow and so the river bed is dry and there is no perceptible flow for most of its course until the confluence with the Blackwater. A heck has been installed at the confluence to prevent fish migrating up the river during periods of high flow and then being stranded. There are mitigation measures in place across the wider Conon hydro scheme but ecological quality has been significantly impacted in the Glascarnoch catchment.

Figure 1 Map of Loch Glascarnoch catchment.
There are diversions into the Loch from the west via Loch Droma and the north via a tunnel from Loch Vaich. The full operating range of Loch Glascarnoch is 17m although normally this is around 12m down from spill. This range is required to fully utilise the volumes of water associated with periods of high run-off. The Mossford generator is typically on full-load 24 hours a day when the level is 5.7m from spill. Water spilled from Glascarnoch is lost from the whole system therefore this leeway is required by the operator in order to avoid spill in the winter and make full use of the water for the purpose of electricity generation.

Environmental Impacts
The inflow to Loch Glascarnoch, Abhainn an Torrain Duibh, although largely physically unmodified, receives diverted water via aqueduct from Loch Droma. It does however represent the nearest example to the natural state of the Glascarnoch River prior to the dam being built. Figure 2 shows photographic evidence of the generally unmodified state of this watercourse above the dam. The presence of white water and a generally broken surface demonstrates the good flow rate entering the loch.

Figure 2 Glascarnoch River looking downstream towards Loch Glascarnoch.
Figure 3 View from top of Glascarnoch dam looking down to the channel of the Glascarnoch River.

Figure 4 Looking down from Glascarnoch Dam onto dry river bed.
The photos above were taken after a period of sustained rainfall. During dry weather, the impacts would be even more obvious and acute.

Figures 3-6 illustrate that the river channel directly downstream of the dam is completely dry. As there is no compensation flow, the channel directly below the dam is completely empty of water for approximately 100m. Further downstream, some water re-enters the river channel (Fig. 4) from a mixture of occasional releases from the dam, seepage and a few small tributaries. However, this water gives no perceptible flow and large areas of the river bed remain uncovered.

Even 1.5km downstream (Figs 5 and 6), the riverbed is still largely dry. Where there is any water, it is in stationary pools rather than flowing naturally. On one occasion, the
river was followed some 2.5km down to the point where it joins the Blackwater, and it was observed that there was only one small stretch of water, where a small tributary joined the river, where there was any perceptible flow.

There is no fish pass at Loch Glascarnoch and to that end a heck was installed at the confluence of the Glascarnoch River and the Blackwater at the time of construction (Fig. 7).

**Figure 7 Heck at the confluence of the Glascarnoch & Blackwater Rivers.**

The purpose of this heck is to act as a deliberately impassable barrier to prevent adult fish migrating into the Glascarnoch River during times of high flow and thus becoming stranded in the pools when the flow stops again.

**Current Controls & Legislation**

For any large new hydropower schemes, the Electricity Act 1989 provides for the acquisition of water rights in Scotland. The Scottish Ministers may authorise, through a Water Order, the right for a licensed person to compulsory abstract and divert the water necessary for operating a hydro scheme. The order may also specify the quantity of compensation water to be provided when the water level or flow will be adversely affected by abstraction. Only one order has been made since the introduction of this Act. This was to grant abstraction rights for the Cuileig Hydro Generating Station.

The Act is not retrospective and so schemes constructed prior to the Act, such as at Glascarnoch, are not subject to these regulations. The WFD applies to all waters in all EU states, and so older schemes will have to be reviewed in light of the new Directive. Either the Electricity Act 1989 needs to be amended to allow periodic review of the conditions or new regulations are needed.

Smaller schemes (less than 1MW) are dealt with under planning law. Local Authorities do consult with SEPA and SNH and can take account of environmental impacts of abstraction and impoundment but as these schemes do not arise very often in any locality, LA planners often have little experience of hydropower schemes. SEPA believes
that an integrated approach will allow for best environmental practice to be applied and should give developers clearer and more consistent regulation.

The new regulations proposed in the Water Environment Bill would provide the opportunity to reassess the Glascarnoch scheme in terms of modern day best practice. Its environmental impact and sustainability could be assessed alongside its social and economic benefits.

**Possible mitigation measures under WFD**

As noted earlier, there are some existing mitigation measures in place across the wider Conon scheme. The operators liaise with the Conon and District Salmon Fishery Board over compensation flows into the Blackwater. There is an agreement to release compensation flow from Loch Vaich into the River Vaich, which continues into the Blackwater.

There is also a fish trapping facility further down the Blackwater at Loch na Croic which is used to obtain broodstock. There is a hatchery provided by the operators, under the scheme agreement, which is supplied with eggs from this broodstock. These measures were put in place to compensate for lost spawning and nursery areas when the scheme was built.

Under the terms of the WFD, the Glascarnoch River will have to be classified as a Heavily Modified Water Body (HMWB). The target status would then be to achieve 'good ecological potential'. This is the best status that can be achieved, consistent with the reasonable operation of the existing hydropower scheme. Under these circumstances, it is likely that some form of compensation release would be required.

However, the WFD does allow limited derogations from these requirements where it is not possible, or prohibitively expensive, to achieve good ecological potential. It is possible that this scheme may qualify for derogation when the social and economic benefits are taken into account and allowances made for the mitigation measures elsewhere in the scheme. If the scheme did qualify for derogation, it is possible that the current position, where no releases are made, could continue despite the severe nature of the impacts.

Glascarnoch will almost certainly qualify as a heavily modified water body and SEPA would need to work with SSE to determine if the scheme also qualified for derogation. This could potentially involve a significant amount of environmental monitoring and detailed social and economic assessments. If the scheme did qualify then less stringent environmental objectives may be appropriate in this case. These assessments should allow SEPA to determine if a new requirement for a compensation flow is justified and, if one is required, what the flow should be.
Abstractions for Aquaculture
Case study: FISH FARM ABSTRACTION, SCOTTISH EAST COAST

Fish farming provides significant income to Scotland’s economy and is particularly important in many rural areas. However, fish farms can cause environmental impacts to the rivers and coastal waters where they are typically situated.

In the past, the main environmental impacts of fish farming have been considered to be problems of escaped fish affecting local wild populations, and the impact of lice and the chemicals used to control them. These problems have tended to overshadow the impacts that can arise from abstraction, but these impacts can be just as damaging in their own way. SEPA would wish to ensure that all the environmental impacts of fish farming can be subject to the appropriate controls so that this important industry can be put onto a more sustainable footing.

This study describes a real example of a fish farm abstraction presently in operation on a major Scottish river. The precise location of this site has not been included as SEPA wishes to identify this only as an example of an activity that would fall under WFD controls rather than highlighting an individual operation.

Background to the case study
This case study describes and quantifies the impact on migratory salmonid fish populations of an existing water abstraction from a significant tributary of a major Scottish river during summer 2000. The study also looks at previous extended droughts when a length of river (approximately 2-3 km) is known to have become dry due to drought conditions exacerbated by the abstraction.

The abstracted river is a major tributary of a large Scottish catchment and supports significant populations of migratory salmonid (salmon and sea trout) fish species. The tributary, and the whole catchment, support important recreational fisheries that provide a significant regional and local economic asset. These fisheries rely on healthy juvenile populations and high water quality.

The abstraction takes place via a lade channel, from the tributary for use in the farm producing rainbow trout. This abstraction has little impact on main river flows under normal conditions but during periods of drought, when demand in the farm is heightened and available supply is reduced, flows in the tributary have been significantly reduced. These abstractions are legal and the environmental damage, which results from the reductions in flow, is presently uncontrollable.

The farm discharge, where extracted volumes are returned to the tributary, is located approximately 2-3 km below the abstraction point. This means that the extent of affected river can be this same 2-3 km in length.

Environmental Impact
During the second week of July 2000 a small spate encouraged the movement of large numbers of salmon and grilse (salmon which have spent only a single winter at sea) into the tributary. Many of these fish moved upstream, passed the fish farm abstraction, to a
natural obstruction point. This barrier is only passable by salmon during higher flow conditions than were present during the July spate.

Subsequently, the weather became dry and warm and water temperatures rose as drought conditions developed. Typically during drought conditions, adult salmon will utilise areas of deep water and cover in order to avoid the extreme stresses these conditions can produce. In this case, many of the fish congregated in the deeper water between the natural obstruction and the point of abstraction.

Usually, many of these fish would have moved elsewhere in the river system by swimming downstream to other locations where conditions were better. However, during summer 2000 it was not possible for these fish to move downstream because the flows were so low that they were not physically able to pass.

As the drought continued, these fish became further stressed and many were infected with fungal growths. Many of these fish died and local District Salmon Fishery Board bailiffs removed some 700 adults over the 500 metre length between the natural obstruction and the fish farm abstraction. Many of these deaths may have been avoided had these fish been able to move to less stressed locations where infection rates were lower and so the chances of survival improved.

**Understanding the Potential Long Term Impact**

Although some of the dead fish would not have survived to spawn successfully due to natural processes, angling and other losses, it is clear that a large quantity of eggs have been lost. Such losses could impact upon future juvenile populations in certain areas and on future numbers of returning adults to the system as a whole.

It is not possible to determine the absolute extent of impact on juvenile fish populations as a significant degree of population self-regulation takes place subsequent to egg hatching, particularly during the first summer of life. This takes place in response to population carrying capacity limits determined by habitat quality in the juvenile nursery areas around spawning locations.

In addition to adult deaths the reduced flow between the farm abstraction and discharge was such that juvenile fish were forced to utilise small areas of pool and stream in the absence of more normal flow conditions. These conditions forced large numbers of fish into small areas increasing stress and vulnerability to infection and predation. Such losses are not easily quantified but will impact upon juvenile production form and numbers of adults returning to the affected section.

**Problems in the past**

The abstraction has caused similar problems in past years in addition to those summarised for 2000. On occasion, the major tributary has been observed to become completely dry causing direct losses to fish populations and other aquatic organisms.

Photographs 1, 2 and 3 showing the abstracted tributary flows above the abstraction, below the abstraction and below the discharge point circa 1989. Clearly, significant flows exist above the abstraction but are not present below until the return of abstracted volumes at the farm discharge. Such effects are likely to have caused the loss of adult and juvenile fish in similar circumstances to 2000. Further, such losses are likely to have
taken place, to different degrees, in each year of drought when abstraction has taken place.

**Timing of Impacts**

The effects of water abstraction during summer droughts on the downstream movement of adult salmon are described above. Although the extent to which reduced flows impact upon adult fish survival will change at different times of the year, largely reflecting peaks in numbers of returning adult salmon to the system, impacts upon the continuity of the system or on other fauna may be more consistent. For example, invertebrate populations will be directly impacted within dried sections at all times of the year.

Different impacts are likely should droughts and abstractions take place during other times of the year. For example, resultant breaks in river continuity, if they were to take place in spring (principally March - May) would interrupt the downstream migration of salmon smolts.

*Photo 1: River above the point of abstraction town bridge, circa 1989*
Such interruptions would increase the risk of predation of these fish during a particularly vulnerable period and alter natural physiological changes and processes that take place during this migration in preparation for the transition from fresh to salt water. Therefore,
although droughts exacerbated by abstraction are most likely to take place during summer months, impacts on fauna will occur whenever these events take place.

**Current Controls & Legislation**
There is currently no specific legislation that allows abstraction of this nature to be controlled. Common law offers some protection to the rights of water users downstream but as long as the water is returned then these rights are not usually seen to be affected.

New regulations would allow the environmental impacts of abstractions to be assessed against the WFD criterion and the appropriate controls put in place.

**Possible mitigation measures under WFD**
It is likely that under any new regulations, a new prescribed flow condition would be applied to this abstraction. This would define a flow that must be left in the river for environmental purposes and abstraction could only take place when flows were greater than this.

There are a number of things that the fish farm operator could consider, which may allow continued operation of the fish farm during droughts without causing a significant impact on the abstracted water. These may include moving the discharge point upstream to just below the abstraction point. This would mean that the 2-3km section does not dry up during dry weather. Alternatively, some of the water could be re-circulated through the fish farm and this would reduce the volumes that currently need to be abstracted.

SEPA would want to discuss the options available with the fish farm operator and so determine what form of water use licence would be most appropriate. It seems likely that some minimum protected flow downstream of the point of abstraction would be sought.
RIVER ENGINEERING IN SCOTLAND

Introduction
The quality of habitats in or near water is an important component of the overall quality of the aquatic environment. The physical condition of river channels may be subject to a wide range of pressures, which can impact upon environmental quality. Damage may occur by direct modification of the habitat structure through river engineering for flood defence, erosion control, fisheries schemes and drainage work.

River habitat modification
The natural heritage of Scotland plays an important role in the national economy. The many river-based activities that support local tourist and industrial activities would not be productive without good quality river habitat. Yet, data from the River Habitat Survey reveals that 28% of the sites are classified as obviously, significantly or severely modified. Half of the 779 baseline survey sites in Scotland are classified as semi-natural while just 25% are recognised as predominantly unmodified. A degree of spatial variation can be found within Scotland, reflecting the pressures and impacts of different human activities. The south east has the highest proportion of significantly modified sites at 18% compared to 7% and 9% in south west Scotland and the Highlands, Islands and Grampians, respectively.

River Engineering
River engineering works vary significantly in scale and type, but the degree of impact may be more directly related to frequency of activities and the sensitivity of the river system. Works carried out to control erosion, channel migration and improve fisheries habitat have resulted in widespread river re-sectioning (straightening and deepening), bank reinforcement, channel re-profiling and in-stream structures such as croy’s. These activities often result in significant modifications to the channel, potentially causing a deterioration in ecological status.

There have been situations where attempts to improve the river system have resulted in further habitat damage, as schemes can be poorly designed and show little consideration for the geomorphological processes of erosion and deposition that occur within the river system. The case studies provided in this report highlight the potential impact from river engineering works, in terms of ecological status and physical habitat quality of the river system. There is significant evidence to indicate that even small-scale engineering works can have a significant ecological impact.

Current Controls and Legislation
Existing legislation, such as the Conservation (Natural Habitats etc.) Regulations 1994 and the Environment Act 1990, provide protection to designated conservation sites and protected species from the impacts of river engineering works. However, current legislation does not sufficiently safeguard river habitats within the wider environment.

SEPA and SNH consultation responses to planning applications must be considered, under the Town and Country Planning Act, 1997, by local authority planning departments. However, without the requirement for geomorphological assessments as
part of a planning application, the planning authority is unable to fully consider the potential environmental impacts of proposals.

The Town and Country Planning (General Permitted Development) (Scotland) Order, 1992, has been interpreted in very different ways. A consistent approach has not been taken and permitted development rights are afforded to many developments and activities that may have an impact upon aquatic habitat quality.

The lack of a comprehensive notification procedure means that many river engineering works are undertaken without the knowledge of statutory agencies, particularly those that fall within ‘permitted development’.

**The Water Environment and Water Services Bill and the Water Framework Directive**

The Water Framework Directive, Article 11(3)(i), requires controls over impacts upon hydromorphological conditions “for any other significant adverse impacts on the status of water identified under Article 5 and Annex II, in particular measures to ensure that the hydromorphological conditions of the bodies of water are consistent with the achievement of the required ecological status or good ecological potential for bodies of water designated as artificial or heavily modified”.

The WFD and the Water Bill requires there to be no deterioration in the surface water status. This includes physical habitat for high status waterbodies. Pressures that may appear to be relatively low risk could have significant impacts, particularly for high status waterbodies. For example, small-scale engineering works such as croys and dredging can appear to have minimal impact on river habitat when carried out in isolation. Yet, even on rivers like the River Tweed evidence indicates that the construction of numerous in-stream structures, such as croys and fishing platforms, has led to deterioration in river habitat quality. Assessment at the appropriate scale is needed to prevent the degradation of the river habitat from the cumulative effects of small-scale river engineering works. Consequently, it may not be possible to treat each type of engineering works as a standard practice due to variations in sensitivity, between reaches and waterbodies, to the same habitat modification.

The long-term sustainability of any proposals needs to be taken into account when assessing the potential impact. Where permission for works is granted, the regulatory authority would want to ensure that best practice is followed and the appropriate measures are put in place to prevent damage to the aquatic environment. Designs should be approved prior to the start of any works and specialist advice sought by the contractor where required. This will enable both statutory agencies and developers to identify the opportunities to use softer engineering techniques and minimise the environmental impact.

SEPA considers that all river engineering works should be covered by any new regulations and that operators and landowners should notify the regulatory authority of proposals for any such works. The most appropriate instrument, including registrations, general binding rules, codes of practice and licences should be used to control the different pressures on aquatic habitats, according to the level of risk they carry.

**Conclusions**
The proposals in the Water Environment Bill will provide the opportunity to prevent further deterioration and restore historically damaged habitats in Scotland. SEPA believes it is necessary that all engineering works, regardless of scale, be managed within a single integrated set of regulations. The legislation should provide a holistic framework within which river engineering works can be considered in the context of all activities undertaken within the river system.
RIVER CHANNEL MODIFICATION
CASE STUDY: THE RIVER EDEN, FIFE

Introduction

River channel modifications are one of the principal causes of river habitat degradation in Scotland. Re-sectioning (straightening and deepening) and dredging works are frequently undertaken to improve land drainage and maximise the area of land available for agriculture or development. The provision of grant aid in the 1970s to carry out dredging and ditch work on agricultural land influenced the extent to which this practice was adopted at the time.

Figure 1

Straightening and deepening of a watercourse

Substrate dredged from the channel smothers bankside vegetation

Bank reinforcement is also widespread across Scotland, probably due to the perceived need to control erosion and prevent channel migration. Unfortunately, resectioning and dredging has the tendency to give rise to increased bank erosion and flood risk downstream of the works, which leads to a need for further bank reinforcement. This report details evidence of the damage that has been caused from such river engineering works, focusing on the River Eden, Fife, and the limited regulatory powers available to protect the environment.

Background

Historically the River Eden has been managed to improve land drainage and reduce the impact of flooding on urban and agricultural areas within the catchment. Consequently, the river channel has been modified and a number of reaches resectioned. The catchment is a highly productive agricultural area with only small pockets of industrial and urban areas.

The river is a productive salmon, sea trout and brown trout rod and line fishery with salmon and sea trout using the entire system for spawning, except where physical barriers prevent migration. Furthermore, the Eden Estuary is a designated RAMSAR and SSSI (site of special scientific interest).
In 1995, 12 farmers in the catchment began planning dredging works of a 5-mile stretch of the River Eden to improve drainage of the adjacent farmland (figure 2). Sensitive areas to protect were identified and the dredging work was planned over a 2-3 year period with small amounts of material to be removed each year. The farmers commissioned a report by the Farming Wildlife Advisory Group and consulted SEPA and SNH to ensure works met with the agencies’ requirements. However, FWAG’s guidelines and the final plans proposed by the farmers, were not followed in their entirety and large quantities of dredged material were removed in 1997.

**Environmental Impact**

During the dredging works, SEPA received a number of complaints regarding chronic discoloration of the water. Furthermore, complaints were received from a local angling club expressing concern over smothering of redds with silt. Following the dredging works, which began in August 1997, there was a measurable impact on the ecology of the river.

- **Heavy silt deposition within the channel**, contributed to the biological downgrading of the watercourse. Bankside biology scores dropped from class B (fair) recorded in July 1997, to class C in September 1997. The biology field report states “the water was totally turbid with mud from the bank workings upstream. The blanketing effect from this is almost certainly responsible for the low score.”

- In **May and November 1998 low biology scores (class C)** were reported. SEPA biologists reported ‘the impact of the river works and considerable alterations to the river bed’, as the primary cause of poor biological samples at this time. Physical
habitat and ecology have only recently recovered with July 2001 scores indicating class A2 (good).

- The macrophyte beds at Bowhouse and Ramornie were destroyed. Given the lack of stony substrate, upon which macrophytes such as *Ranunculus* secure themselves, it has been difficult for these macrophytes to re-establish. These macrophyte beds were important habitat for fish, providing some of the little cover available in the river channel. In June 2000, some 3 years after the works were carried out, biology reports indicate some recovery of the macrophyte beds and these are beginning to become quite well established.

- Proposals had been to remove overhanging tree limbs that were causing obstruction during flood events, but instead entire trees were cut back to leave just short stumps. In addition, marginal vegetation was uniformly removed from both sides of the channel in a number of sections, reducing the habitat diversity both of the bankside vegetation and the channel. The removal of vegetation is of primary concern given the habitat this provided for water voles and otters.

- Elevated nutrient levels (orthophosphate) at three monitoring sites were recorded during late August and October 1997. In late August 1997 orthophosphate levels were 4 times higher than those recorded in June 1997 and were significantly higher than those recorded upstream of the river works (0.43mg/l and 0.06mg/l orthophosphate, respectively). Elevated nutrient levels continued to be recorded until September 1998.

The removal of vegetation and the severe dredging that took place has resulted in a uniform, steep-sided channel in many sections. Much of the channel where dredging took place remains a trapezoidal, and particularly deep channel preventing establishment of vegetation and reducing diversity of in-stream habitat.

Figure 3 - The re-sectioned channel of the River Eden - Limited vegetation growth and a straight trapezoidal channel provide limited habitat diversity.

In 1995, SEPA (and SNH) were voluntarily approached by the consortium of farmers in the River Eden to comment on the proposals for the dredging works. The group sought advice from SEPA and incorporated guidance into the proposals. Despite the initial
success of this voluntary approach, the proposals were not followed and SEPA was not afforded an opportunity to advise on contracts or otherwise contribute to improving management practice undertaken.

Following complaints from the public formal samples were taken from the River Eden. These samples indicated that suspended solids were elevated for the time of year, but levels were similar to spate conditions. Consequently, there was no evidence for prosecution purposes. Furthermore, once the damage had been done SEPA was unable to seek any remedial action due to lack of regulatory powers.

**Current controls and legislation**

*Town and Country Planning Act 1997*

The Town and Country Planning (General Permitted Development) (Scotland) Order 1992 and the Flood Prevention and Land Drainage Act (Scotland) 1997, enables landowners to undertake watercourse management, beneficial to agriculture, as they consider appropriate without consultation. Dredging works as an improvement to land drainage for agriculture are exempt from the need for planning permission, removing the opportunity for SEPA to assess the suitability of the works and to ensure good management practice is undertaken.

*Waste Management Licensing Regulations 1994*

In the case of the River Eden, SEPA was required to issue an exemption from Waste Management Licensing to the farmers responsible for the disposal of dredgings from the River Eden onto land. The current Waste Management Licensing regulations (1994) identify ‘the spreading of dredgings from any inland waters on land which is used for agriculture’ as an exempt activity, where it results in benefit to agriculture or ecological improvement (schedule 3, condition 7). Consequently, SEPA was required to register the exemption.

*The voluntary approach*

Statutory agencies, including SEPA and local authority planning departments, do stress the importance of consultation through guidance documents, but the request for advice and the adoption of mitigation measures is voluntary. The initial approach taken by the landowners in the Eden catchment was positive and enabled statutory agencies to promote best practice. Unfortunately, the current legislative framework did not enable the agencies to enforce this best practice and the result was damage to the physical habitat of the river.

There are a range of organisations and projects in Scotland that provide advice to landowners and encourage sensitive practices through voluntary initiatives. However, while these projects make worthwhile and highly beneficial attempts at remedying local environmental concerns they lack the long-term resources, focus and legislation required to effectively control the level of resectioning, dredging and bank protection that occurs in Scotland.

**Possible mitigation measures under WFD**
To achieve the objectives of the Directive it will no longer be possible for dredging works, channel modification and bank protection works such as those carried out in the Eden catchment, to continue without adequate mitigation measures.

SEPA would like to see new legislation that ensures the implementation of best practice. Comprehensive national guidance that defines best practice is required to make sure that the river works do not result in unnecessary environmental damage. Such guidance will support local initiatives and enable them to effectively promote best practice.

However, such best practice must be enforceable and SEPA therefore supports the recommendations put forward in the Water Bill to use general binding rules, management agreements or licences, where required, to control activities. Furthermore, the notification procedure recommended by the Bill would not only facilitate effective distribution of national guidance, but also enable the regulator to ensure the guidance is followed.

Activities such as dredging could potentially require simple registration and adherence to best practice where activities are small-scale. However, the degree of control will be dependent on the proposed volumes of dredging, the frequency of activities and on the sensitivity of the river catchment. The removal of large quantities of gravel in important salmon rivers, for example, may require tighter controls.

SEPA believes that national guidance should form the basis of General Binding Rules where these are considered the most appropriate mitigation measures. The conditions of a licence, if required, should also relate to this guidance to ensure consistency. An approach based around enforceable, statutory guidance would help to increase the understanding of the sensitivities of the river system and would allow SEPA to ensure that good management practices are always employed.
CHANNEL REPROFILING
CASE STUDY: River Mudale, Caithness

Introduction

Although re-profiling of river channels causes significant damage to existing semi-natural river habitats, such work is common across Scotland and is frequently the focus of discussion between landowners, developers, fisheries managers and statutory agencies. Such river works are often related to a perceived need to control erosion and channel migration in both upland systems subject to spate and lowland agricultural rivers.

The control of erosion and subsequent deposition is sometimes associated with fisheries habitat schemes, which set out to improve the angling amenity of a river. However, some of these schemes are poorly designed and actually damage the environment they seek to improve. This report highlights the limited powers currently available to statutory agencies to prevent damage to habitat or to influence the design and practices used for channel modifications for the benefit of fisheries.

Background

The River Mudale was the focus of significant bank works, undertaken by the riparian owners, during the summer of 1996. The aim was to improve both the availability and characteristics of salmon spawning areas within a 1 km stretch of the river upstream of Altnaharra. A consultant was appointed to assist with the design of engineering works for the river channel, but unfortunately, these works caused significant damage to the river habitat.

Figure 1 - Location map of the River Mudale

The River Mudale is situated upstream of Loch Naver and prior to the river works, was considered one of the few sizeable watercourses in Scotland that remained predominantly unmodified. The river supports brown trout and salmon and is used by local and visiting anglers. At the head of Loch Naver, where the River Mudale flows into the loch, is Altnaharra SSSI, designated for its fenland habitat and nationally rare
species. The Mudale is a high-energy river where natural processes result in significant deposition and erosion within the channel and the associated banks.

**Environmental Impact**

During the course of the design of the new river channel, the consultant and landowner contacted SNH who expressed concerns about the methodology and the impact on the river environment. There was no consultation with SEPA. SEPA found out about the works following a routine inspection at the Altnaharra Hotel in August 1996 at which time works had already commenced. SEPA biologists then undertook an assessment of the biology of the river to assess any impact.

- The channel reprofiling over a 1km stretch resulted in a wide shallow channel, which has significantly altered the natural river features. The reduction in vegetation and new channel form and has resulted in limited cover for aquatic species, including fish.
- The bank re-profiling resulted in significant levels of deposition downstream (figure 3).
- This deposition had a noticeable impact on the macroinvertebrate population of the river. Biology sampling was carried out by SEPA at three points located downstream of the fisheries works. All sites showed a significant impact when compared with reference conditions. The low number of taxa present (indicating a reduction in diversity of species) and a reduction in the number of sensitive species indicated that biological quality of the three sites was poor.

Coincidental to the fisheries scheme, works were also carried out on the road bridge at Altnaharra in May 1996. The contractor informed SEPA of these works well in advance and pollution prevention measures were discussed on site and then implemented. The aim of these measures was to protect the aquatic community and fishing interests of the river.

**Figure 3**

The poor biological quality at the sampling points downstream of the bridge could have been due to the works on the road bridge. However, the sample taken some 50m upstream was also poor, indicating that the effect of the fisheries works extended at
least as far as the bridge. With no other major impacts present above this, the impact, at least upstream of the bridge, was attributed to the river engineering works carried out for the fisheries scheme.

**Current Controls and Legislation**

There are four main areas of legislation that relate to the channel re-profiling work carried out on the River Mudale, the Town and Country Planning Order 1992, COPA 1974 (as amended), the Environment Act 1990 and the Conservation (Natural Habitats etc.) Regulations 1994.

**Town and Country Planning Order 1992**

SEPA is a statutory consultee with regard to planning applications under Article 15 (1)(h) of the Town & Country Planning (General Development Procedure) (Scotland) Order 1992. This includes development that consists of or includes ‘the carrying out of works or operations in the bed or on the banks of a river or stream’. However, Article 3 (schedule 1, class 20) of the Town & Country Planning (General Permitted Development) (Scotland) Order 1992, classes agricultural operations including the carrying out of any works required in connection with the improvement or maintenance of watercourses or land drainage as permitted development. The works carried out on the River Mudale were considered to be permitted development by the planning authority.

**Environment Act 1995**

SEPA has a duty under section 34 (2) of the Environment Act 1995 to ‘promote a) the conservation and land associated with such waters and b) the conservation of flora and fauna which are dependent on the aquatic environment’. The Act provides SEPA with the authority to consider and advise on conservation issues, but unfortunately does not provide the powers for SEPA to ensure this advice is implemented. Furthermore, there is no requirement for SEPA to be consulted over such works, unless part of a planning application.

**Conservation (Natural Habitats etc.) Regulations 1994**

The Conservation (Natural Habitats etc.) Regulations, 1994 provide Scottish Natural Heritage (SNH) with the power to control works carried out within designated areas, including Sites of Special Scientific Interest (SSSI).

During a site visit with the consultant, and in subsequent correspondence, SNH expressed concern over the need for the river works, the sustainability of the proposals, and the need to consider alternative catchment management approaches. In August 1996, SNH recommended a geomorphological survey prior to commencement of the project. However, by this date the work had already commenced and SNH were unable to prove that the proposed works would affect the SSSI downstream.

**Control of Pollution Act, 1974**

The Control of Pollution Act, 1974, enables SEPA to control the entry of polluting matter and effluents into water. However, there was no communication with SEPA from either the landowner or the consultant regarding the fisheries works. Consequently, SEPA was unable to provide guidelines on the prevention of pollution.

**Possible mitigation measures under WFD**
Local authorities have considered fisheries works to be a permitted development in a number of catchments. SEPA believes the requirement set out in the Water Bill that ‘no engineering works should take place without prior notification to the regulator’ will enable assessments of the impacts to be made and appropriate consents to be put in place, prior to works being carried out. This will help to reduce the risk of silt disturbance as occurred during the works on the River Mudale. Where the impact is predicted to be small, the use of general binding rules and supplementary guidance may be all that is required. However, where schemes could result in significant impacts more stringent conditions, such as a licence may be required.

This flexible approach should help to overcome inconsistencies and to avoid the implementation of poorly designed schemes. SEPA believes the provision of best practice guidance and where required, more stringent conditions should enable statutory agencies to work in partnership with landowners and contractors to achieve the environmental objectives required by the Water Framework Directive.
DIFFUSE POLLUTION IN SCOTLAND

Introduction
Diffuse pollution is non point source contamination such as run-off from fields or leaching of nutrients and pesticides from soil into surface and ground waters. It can also be pollution arising from a number of small, dispersed point sources such as field drains and surface water drains. Diffuse pollution is essentially the scattered, discrete inputs of contaminants that are collectively significant, but which cannot practically be controlled with discharge consents.

Diffuse pollution is mainly related to the way in which land and soil are used and managed. It can arise from current and past land use in both agricultural and urban environments. It can affect rivers, lakes, coastal waters and groundwaters. Groundwaters are vulnerable to leaching of pollutants from the land surface and from areas of contaminated land. Surface waters are affected by rainfall washing over and off the land as run-off.

River water quality is also influenced by the contribution made to their flow from springs and seepages from groundwater. Groundwater is connected with surface water and pollution can pass from one to the other. Diffuse pollution has increased as agriculture has intensified and more roads and houses have been built. The natural permeability of the landscape is affected by land use and its ability to retain water can be reduced significantly.

Urban Diffuse Pollution
The urban environment is significantly impacted by diffuse pollution; urban drainage (excluding sewage effluents and combined storm overflows) accounted for 13% of downgraded rivers in Scotland in 2000.

Run-off from impermeable surfaces in urban or areas can be highly polluting and can also increase the risk of flooding. The run-off, although variable in composition, may carry a mix of polluting substances, such as toxic metals, pesticides, oils and hydrocarbons, sediments and oxygen-depleting substances. The majority of surface water discharges receive no treatment before entering rivers or streams, and the passage of water from hard surfaces such as car parks, roads and paved areas into watercourses is rapid. This also means that there may be little dilution in urban rivers to reduce the impact of these pollutants when surface water outfalls are discharging. This can lead to poor water quality and ecological damage.

Agricultural Diffuse Pollution
Diffuse pollution arising from agriculture is also a major source of water pollution. In 1996, 1121km of rivers were downgraded in Scotland (33%) as a result of diffuse agricultural pollution. It is currently the second most important cause of downgrading for rivers and lochs and is predicted by SEPA to become the primary cause of such downgrading by 2010.

Diffuse pollutants can also enter groundwater, especially water soluble pesticides. The use of water for irrigation in agriculture can worsen water quality problems, particularly in drier areas, where abstraction may be commonplace for growing crops such as
potatoes. This is due to the further reduction in river flows during the driest times of the year.

The principal categories of diffuse pollutants from farming are:

- **Nutrients** – Both nitrate and phosphate can enter waters, enriching them and causing changes to their ecology. These can be derived from livestock slurries and manures, fertilisers and non-agricultural wastes applied to land.

- **Silt** - Inappropriate or poorly timed cultivation and poor livestock management for example, overgrazing or poaching of land can accelerate soil loss and erosion. Soil particles can smother gravels in river beds that fish use for spawning. Pollution by soil particles can also affect wildlife in lochs and rivers. Soil particles can have other chemicals adsorbed on them, including phosphates and pesticides, particularly from the top few centimetres of soil.

- **Pesticides** – Leaching, run-off, or spray drift of pesticides can lead to diffuse pollution of water. Spillage during the mixing up of pesticides can also lead to significant contamination.

**Current Controls and Legislation**

There is no real targeted piece of legislation that specifically deals with the issue of diffuse pollution. Instead, there exists a piecemeal of regulatory and voluntary measures that are used to tackle the problem. This inevitably leads to significant gaps and complex administrative arrangements.

*The Voluntary Approach*

SEPA, together with many other organisations, provides advice and guidance to farmers in the form of leaflets, participates in awareness raising activities, pollution prevention campaigns, and targeted initiatives. Not all of these relate directly to diffuse agricultural pollution. SEPA views provision of information, influencing, partnerships and persuasion as fundamental to addressing the issue of diffuse pollution.

*Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 2001*

One of the most successful pieces of legislation targeted at the agricultural sector in recent years is the Control of Pollution (Silage, Slurry and Agricultural Fuel Oil) (Scotland) Regulations 1991, recently replaced by the equivalent 2001 Regulations. These Regulations have significantly reduced the number and severity of point source pollution incidents caused by discharges of effluents such as silage or slurry. The Regulations set technical standards for storage facilities for silage and slurry and have requirements for siting, design and installation.

With respect to slurry, there has been increased reliance upon agricultural contractors using specialist (low pressure) machinery and a lack of attention to detail to the rate and timing of application can result in run-off to surface waters and an increased potential for losses of nutrients to ground waters. The 2001 Regulations include provision for the service of notices where a significant risk of pollution is identified. SEPA can also specify that a farm waste management plan be prepared and implemented.

*IPPC Directive (96/61)*
IPPC represents a new and comprehensive form of environmental regulation. This regulatory regime extends to intensive pig and poultry installations over certain thresholds. Each installation requires to be permitted by SEPA. General Binding Rules (GBRs) have been identified as the best way forward for this sector and a precursor to these, Standard Farming Installation Rules, have been developed by SEPA and the Environment Agency together with the industry. Scottish Ministers have yet to approve GBRs and in the interim period, these rules are to be used. IPPC involves the adoption of “Best Available Techniques” and these are still being evaluated as part of the production of the Best Available Technique Reference (BREF) Note for this sector at a European level.

Nitrates Directive (91/676)
The Nitrates Directive aims to prevent pollution of water by nitrate derived from agricultural sources. There are strong links between the Nitrates Directive and the Urban Waste Water Treatment Directive with respect to eutrophication and sensitive area designation. SEPA carries out monitoring of the environment to assess the extent of nitrate pollution in surface and groundwaters in Scotland and reports these data to the Scottish Executive.

Measures include the designation of nitrate vulnerable zones (NVZs) for land draining into waters at risk from nitrate pollution. Once an area is designated as an NVZ, Action Programme Regulations are introduced which farmers are required to comply with. Scottish Executive agricultural staff are the enforcing authority for these Regulations.

Groundwater Directive (80/68)
The Groundwater Directive will eventually be repealed by the WFD in 2013. A number of its measures are, however, incorporated within the WFD and there is a general requirement on Member States to ensure that current levels of protection are maintained.

SEPA enforces the Groundwater Regulations 1998. This requires authorisation to be sought for intentional disposals of listed dangerous substances into or onto land. The vast majority of authorisations granted by SEPA relate to the disposal to agricultural land of waste sheep dip. The remaining authorisations are for the disposal of waste pesticide and pesticide washings to land. These wastes contain a range of active ingredients that are further diluted prior to being applied to land at specified rates.

The 1998 Regulations also have notice provisions to prevent indirect discharges of listed dangerous substances occurring to groundwater from activities that take place on or in the ground, for example, petrol storage and sheep dipping.

Bathing Waters and Shellfish Waters Directives (76/160 and 79/923)
These Directives establish a range of water quality standards that must be complied with in order to protect the quality of water and the health of bathers or to protect shellfisheries. These Directives have standards for a range of substances, including microbiological standards that must be complied with. While much attention has been given to the need for adequate treatment of waste water from sewage works and the effects of combined sewer overflows, there is increasing interest, for some waters, of microbiological contamination from diffuse pollution sources, for example, from farmland. The Scottish Executive’s Bathing Waters Strategy identifies the sources and mechanisms for improvement.
The Water Environment and Water Services Bill and the Water Framework Directive

The control of diffuse pollution will be essential for the achievement of the WFD’s objectives. Proposals for implementing the WFD’s requirement in this respect consist of training and education to avoid diffuse pollution; enforceable codes of good practice for agriculture, forestry and urban drainage; and powers for the regulator to intervene using notice provisions where diffuse pollution is affecting environmental quality and the attainment of ‘good status’.

SEPA considers that the control regime for diffuse pollution from forestry and agriculture should be based on the following principles:

- A requirement for the development of general codes of good practice and, where necessary, more detailed sector- or issue-specific rules.

- Mechanisms for effective enforcement of such codes and rules. Codes of practice should be clear about which of their recommendations are mandatory and which are advisory. There also needs to be clarity over how the codes or rules are to be applied. The option to register specific farming and forestry units under a particular General Binding Rule may be required in some cases to clarify where enforcement action can be taken;

- Powers to issue enforcement notices to require reasonable actions to be taken, for example, if a farmer or forester is contravening a code or rule or is likely to contravene a code or rule, should be available to SEPA. SEPA should also have powers to issue ‘works’ and ‘protection/stop’ notices allowing it to specify reasonable actions where it identifies a risk of damage to the status of waters or where remedial action is required to restore water bodies in which ecological status has been damaged;

- Land management contracts also provide the possibility of integrating environmental, animal health, landscape and economic interests. Careful consideration will need to be given to developing appropriate environmental conditions focusing on ‘priority catchments’ and ensuring suitable and effective cross-compliance. Land management contracts are being developed by a Working Group, established by the Scottish Executive. They are already in use as a mechanism to deliver environmental, social and economic benefits to farmers in Europe.

- SEPA recognises that soil fulfils an essential role in buffering water from a wide range of pollutants. Management aimed specifically at maintaining or improving soil quality will play an important role in improving catchment water quality and preventing pollution of surface and groundwaters. Best management practices, such as contour ploughing and targeted fertiliser inputs, could be included as part of a land management contract, which could be tailored to specific catchments with the aim of maintaining and enhancing both soil and water quality. Some of these measures will be covered within statutory Action Programme Regulations within Nitrate Vulnerable Zones designated under the EC Nitrates Directive and will be specified in the PEPFAA (Prevention of Environmental Pollution from Agricultural Activity) Code;
• Training, education and awareness of diffuse pollution are essential in reducing diffuse pollution risks. Consideration should therefore be given to development of accredited training. There may also be the potential to incorporate some training and education requirements within land management contracts. The level of training required should be compatible with the risk from the activity.

• Activities that present a significant risk in terms of diffuse pollution might be more effectively controlled by licensing rather than by codes of practice or General Binding Rules. SEPA would therefore support proposals for powers to use licensing where appropriate and proportionate to the risks involved. For example, the intentional disposal of listed dangerous substances to land or specific activities such as large-scale forest clear-felling.

However, the use of these regulatory options must take account of the particular economic vulnerability of the agricultural sector by ensuring that the most cost-effective means of achieving the environmental objectives are pursued.
Nutrient Inputs from Agriculture
CASE STUDY: RIVER EDEN, FIFE

Introduction
The River Eden catchment is a highly productive agricultural area with only small pockets of industrial and urban areas. Monitoring undertaken by SEPA during the period 1996 to 1999 indicated that farming practices had a significant impact on the river system. Over this period, nutrient levels have been affected such that water quality has been classified as class B (fair) each year for most stretches.

Poor water quality has been an historic problem in the Eden catchment with significant problems arising from trade effluents, septic tank discharges and overloaded sewage works. A large number of improvements have been undertaken to minimise the risk of pollution from these discharges, which have resulted in improvements in dissolved oxygen (DO) concentrations.

Nutrient levels, however, remain high and previous reports indicate that they are related to land-use in the catchment, particularly the significant area of arable agriculture and horticulture. The high inputs of nutrients (nitrogen and phosphorus) in the catchment are affected by the levels of fertiliser application to land and soil erosion losses (including that lost to high wind).

Within the catchment lies the Balmalcolm borehole, which is capable of abstracting 2.5Ml/d of groundwater from the Knox Pulpit formation, one of the most productive aquifers in Scotland. However, during the period between 1974 and 1992 the concentration of nitrate in the groundwater more than doubled from 20mg/l to 44mg/l. Consequently, in 1996 the catchment of the Balmalcolm borehole was designated a nitrate vulnerable zone (NVZ). A much larger area of Fife has been included in the recent designations announced by the Scottish Executive in 2002.

Environmental Impact
Surface Waters
Environmental conditions combined with land management practices are a significant pressure on the water environment. The Howe of Fife, through which the Eden flows, is exposed to strong winds resulting in significant erosion of bare soils. Following harvesting crops, soils often remain uncovered and susceptible to erosion. Dust clouds are quite commonly seen across the floodplain area and sediment is frequently deposited in the River Eden and its tributaries (figure 1). The deposition of sediment in the river undoubtedly contributes to the elevated nutrient levels recorded in the Eden, as phosphorus is bound to soil particles.

Due to high water demand from crops, abstraction for irrigation is a major use of water in the Eden catchment. This has considerable implications for water quality as high levels of phosphorus tend to be related to low flow conditions as the dilution available in the river is smaller. In the 10-year period 1990-2000, with the exception of 1993 and 1998, the highest levels of ortho-phosphate have systematically been recorded in August, when river flows are low.

In addition, it is not surprising to note, given the solubility of nitrogen compounds, that nitrate concentrations in the catchment are closely related to rainfall. Peak
concentrations occur in the late autumn when high rainfall and saturated land predominate. These levels can be exacerbated when high rainfall coincides with bare soils, as a result of crop timings and applications of fertiliser. Crop growth during the autumn and winter period is limited which can exacerbate nitrate losses, if present in excess in the soil.

Buffer strips in the catchment, tend to be relatively narrow, particularly within the Howe of Fife, providing little protection to the river and almost no opportunity for intercepting drainage. The use of buffer strips adjacent to the watercourses in the Eden catchment is considered to be a significant land-take of productive agricultural land. During periods of low flow conditions buffer strips may be as wide as 5-6m, but during spate conditions these strips are extremely narrow and are frequently less than 1m (figure 2). Even with the provision of buffer strips, there is still a strong possibility that nutrients and pesticides will enter surface and ground water via drains and via the lighter, freer draining soils.

*Figure 1 Dust clouds in the Eden floodplain area can lead to sediment deposition in the river*

*Figure 2 Buffer strips become extremely narrow during spates*
The nutrient level of the River Eden is also affected by the large number of field drains that discharge into the river. This source of diffuse pollution is likely to be a significant contributor of nutrients to the watercourse and even existing riparian vegetation will be bypassed by the field drains, preventing any chance of filtration.

**Groundwaters**

Hydrogeological studies carried out on the Devonian aquifer have indicated that there is a rapid shallow groundwater flow system in the Eden valley. Evidence indicates that 60% of the mean annual flow in the River Eden is provided by shallow groundwater discharging from the Devonian sandstones that underlie much of its length. This means that elevated concentrations of contaminants such as nitrate, present in the shallow groundwater, may be discharged to the river along with baseflow levels thereby contributing to the elevated nitrate concentrations.

The Devonian aquifer is classified as highly permeable according to the groundwater vulnerability map of Fife and surrounding area. In areas where there is little or no low permeability drift cover, or where drift cover consists of highly permeable sand and gravel, any contaminants deposited on the ground surface are able to leach rapidly through the subsurface and into groundwater with little attenuation.

**Current Controls and Legislation**

**The Voluntary Approach**

At present SEPA works with farmers to improve farm practices and provides advice through routine planned farm inspections. SEPA proactively promotes the good practice code *Prevention of Environmental Pollution from Agricultural Activity* (PEPFAA Code, Scottish Executive, 1997) which provides guidelines to farmers regarding good agricultural practice, but this is not statutory, with the exception of mandatory measures in NVZs (Scottish Executive, 2001). Farmers are requested to follow the PEPFAA Code but the lack of prescriptive guidance can result in limited improvements. A revised version of the PEPFAA Code is expected later in 2002.

SEPA has worked with FWAG in the Eden catchment to encourage farmers to use buffer strips and to assign set-aside to land adjacent to watercourses. However, the extent to which this has been taken up is limited. Despite opportunities such as set-aside and Countryside Premium Scheme (now Rural Stewardship Scheme) farmers are reluctant to change land-use as the land adjacent to the River Eden is extremely productive.

SEPA also participates in awareness raising activities with farmers and views the role of education, influencing, partnerships and persuasion as fundamental. This approach needs to be developed further under the WFD.

**Nitrates Directive (91/676)**

Much of the River Eden catchment is to be designated as an NVZ (in 2002). Farmers within the zone will be required to follow the PEPFAA (Scottish Executive, 2002) In addition, farmers are required to follow the mandatory measures highlighted in the Nitrate and Phosphorus supplement. Enrichment of freshwaters is not covered by the NVZ designation and is a critical issue for WFD to address.
Possible mitigation measures under WFD

Under the current legislative regimes the control of diffuse pollution may not be sufficient to meet the environmental objectives as defined in the Water Framework Directive. However, provisions within the Water Bill are expected to enable the introduction of effective controls in order to address the impact of diffuse pollution.

These controls may be in the form of management agreements, prior notification, registration, general binding rules (GBRs) or licensing. It is perceived that the majority of farms will pose a minimal risk and will be controlled by the simplest of regimes. However any farming practices that may pose a significant risk may be controlled by GBR, which might be included within an improved version of the PEPFAA code. The Bill should make provision for the issuing of notices e.g., enforcement notices, and suspension notices, which will allow the regulator to take action to stop or prevent environmental damage.
Nutrient Diffuse Pollution
Case study: THE LEET WATER, SCOTTISH BORDERS

Introduction
The Leet Water rises near Whitsome, Berwickshire in the Scottish Borders and flows 21km south-west to Coldstream where it joins the River Tweed. The catchment of the Leet Water and its main tributary, the Lambden Burn drains an area of 113km², which is predominantly arable land. Historically the Leet was an important brown trout fishery, and in terms of its location within the Tweed catchment it provides valuable spawning grounds for the lower reaches of the Tweed. This area is also a candidate Special Area for Conservation (SAC).

Environmental quality in the Leet and its tributaries has declined dramatically over the past 30 years. Historically, there have been a number of problems including high soluble reactive phosphate, large diurnal variations in pH and dissolved oxygen, impoverished invertebrate communities, profuse algal/macrophyte growth, purple sulphur bacteria and fish mortalities. The river has also experienced a steady increase in nitrate concentrations and has now been included within the recently announced Nitrate Vulnerable Zone (NVZ) designations by the Scottish Executive under the EU Nitrates Directive.

Approximately 10 km of the upper Leet was subject to a land drainage order under the terms of the Land Drainage (Scotland) Act 1958 in the mid 1970s that resulted in the re-sectioning of the channel. This led to the existing steep-sided trapezoidal channel. The river gradient is relatively shallow with slopes of <1 to 2° along most of its length. This shallow gradient combined with low flows during prolonged dry weather, results in low velocities, high sediment accumulation (up to 50 cm in places) and at times the watercourse is little more than a series of pools.

Water quality is affected by 4 main sewage effluent discharges from the villages of Whitsome, Swinton, Leitholm and Eccles. However, diffuse pollution, particularly nutrient and pesticide inputs from intensive agriculture is a major factor affecting water quality.

Environmental Impact
The soils in the area are almost exclusively thick clays, which means during heavy rainfall events water cannot permeate through the soil. A high proportion of winter cereal crops are grown in the catchment resulting in large areas of land ‘left bare’ and exposed to rainfall during the winter months. The combination of heavy clays and winter cropping has lead to high rates of surface runoff and soil erosion. The surface runoff carrying soil and nutrients drains into the Leet Water and its tributaries, affecting both chemical and biological water quality.

The Leet Water is affected by high phosphate and nitrate concentrations. Low rainfall (long-term average for the area is 625mm per annum) and high evapo-transpiration rates lead to less dilution of land and sediment derived phosphorus inputs. This has periodically resulted in annual average concentrations twice as high as those of the River Tweed.

Previous studies have shown that there is a peak of soluble reactive phosphorus (SRP), which occurs during the late summer each year throughout the entire Leet Water
catchment (figure 1). Historically these peaks have reached up to 310µg/l, as much as three times the annual average. Despite recent improvements in SRP levels in terms of SEPA’s classification system, peaks in 2000 still reached 180µg/l, more than twice the annual average for that year.

Figure 1

Soluble Reactive Phosphorus and Dissolved Oxygen - Leet Water at Swinton

Note: SEPA’s water quality classification scheme sets the boundary between A2 (good) and B (fair) at 100mg/l SRP and 70% saturation for dissolved oxygen.

The August peaks in SRP contribute to algal blooms, prolific macrophyte growth and drops in dissolved oxygen, which in exceptionally dry years can also give rise to fish kills. Fish kills in 1994 and 1995 were related to diurnal variations in water quality caused by prolific algal blooms. Dissolved oxygen levels measured at the tome varied between 0% and 200%, while the alkalinity of the burn reached as high as pH10 during the day. A visible indicator of these conditions is the presence of purple sulphur bacteria colonies that can be obvious during dry summer flow regimes.

Sediment total phosphorus levels of 1g per kg (0.1%) have been measured in stretches of the Leet. When added to the sediment present, particularly in the engineered upper section of the Leet, this means that a large reservoir of phosphorus is present. The most likely source of these sediments is surface water run-off carrying nutrient-rich particulates from the adjacent fields, coupled with the recycling of nutrients due to algal and macrophytic growth and die back.

Previous studies have shown that the vast majority of the nitrogen input to the Tweed catchment (including the Leet Water) derives from diffuse sources. Nitrate is leached from the fields during periods of high rainfall due to the mobility of nitrate in water. Analysis of routine survey data from 1996 to 2000 shows that increases in nitrate concentrations are related to initial increases in flow in the watercourse.
Current Controls and Legislation
There exists a piecemeal of regulatory and voluntary measures that are used to tackle the problems seen in the Leet Catchment.

The Voluntary Approach
The concern over the steady increase of nutrients in the Leet Water resulted in the formation of the Leet Water Catchment Management Group in 1996. The group consists of local farmers, community councillors, Scottish Natural Heritage (SNH), Scottish Water, the Scottish Agricultural College, Coldstream Angling Association, SEPA and the Tweed Foundation. This group encourages individuals and organisations to contribute to the improvement of the water quality by changing management practices. For example in 1997, the former East of Scotland Water installed phosphate stripping equipment at the local sewage works. This as resulted in a reduction in phosphate levels below Whitsome and Swintonmill.

However, limited action has been taken to change land-use management and agricultural practices, largely due to the lack of targeted regulation. The catchment management group raises awareness of the issues and encourages landowners to undertake best management practices, but it is not possible to enforce improvements. SEPA visited each farm in the Leet catchment in 1998 to inspect, in particular, steading drainage to assess whether this was a possible cause of the water quality problems encountered in the Leet. This study showed that on the whole, farmers were adhering to good agricultural practice. Despite this, however the diffuse pollution problem remains.

Nitrates Directive (91/676)
The Leet Catchment is now included within a designated nitrate vulnerable zone (NVZ). This will allow limited controls over diffuse pollution due to the sole focus on nitrates from agriculture. Farmers within the zone must implement the mandatory measures outlined to the good agricultural practice detailed in the PEPFAA Code (Scottish Executive, 2002) and The Nitrogen and Phosphorus Supplement. Unfortunately, although the code includes guidance on phosphates and the use of organic wastes on land it is statutory only with respect to nitrates offering very limited solutions for phosphate enrichment and will not alleviate the problems of SRP within the catchment.

Possible mitigation measures under WFD
Under the current legislative regimes the environmental objectives as defined in the Water Framework Directive are not likely to be met within the Leet Catchment. However provisions within the Water Bill will help to address this by delivering a more effective regulatory regime. These measures would include identifying significant sources of diffuse pollution, monitoring waterbodies at risk and setting of risk based controls on farming activities within the catchment.

These controls may be in the form of management agreements, prior notification, registration, General Binding Rule (GBRs) or licence. SEPA believes that the majority of farms will not pose a risk and will be controlled by the simplest of regimes. However any farming practices that may pose a risk will probably by controlled by GBRs that will most probably include an improved version of the PEPFAA code.

ENDS
SUBMISSION FROM THE ATLANTIC SALMON TRUST

Water Environment and Water Services Bill Stage 1 Consideration – Definition of Pollution

In its written submission to your Committee, the Atlantic Salmon Trust identified a deficiency in the definition of pollution as set out in the Bill, which is significant in the context of regulating the impact of aquaculture on the water environment, and may have wider implications. In his oral evidence to the Committee on Wednesday 11 September, Andrew Wallace drew attention to this matter. I am now writing to all members of the Committee, on behalf of the organisations represented in the Salmonid Fisheries Forum. We are asking you to pay particular attention to this aspect of the Water Environment and Water Services Bill, and to consider the need for the Committee to propose an appropriate amendment to the Bill.

To recapitulate, we pointed out that:

- As defined in Sub-section 20(6) of the Bill, “pollution” refers to the “direct or indirect introduction, as a result of human activity, of substances or heat into the water which may give rise to any harm”
- The term “substances” is not defined either in the Bill or in the Policy Memorandum
- Although it is widely recognised that organisms are capable of acting as pollutants, this needs to be expressly stated.

We therefore suggested that, in the context of the Bill, the use of the word “substances” should be defined or expanded in such a way as to cover harmful organisms, including cases where introduction at a level at which the organisms are harmful is the result of human activity. In relation to aquaculture, such a definition would ensure that control of the introduction of pathogens and parasites would form part of the regulation of the activity under the provisions of the Bill. In particular, it would counter the argument that has sometimes been advanced that sea lice are naturally occurring parasites, and that their production in the course of salmon cage farming is not therefore a polluting action.

We hope that you will agree that this point needs to be dealt with, and that an amendment to the Bill would be appropriate. We would be very ready to discuss the possible wording of such an amendment with you or with the staff of the Committee, if that would be of help.

JBD Read

for the Salmonid Fisheries Forum
The Association of Salmon Fishery Boards
The Association of West Coast Fisheries Trusts
The Atlantic Salmon Trust
The Salmon and Trout Association Scotland
The Scottish Anglers National Association
Callum Thomson  
Transport & Environment Committee  
Room 3.5  
Committee Chambers  
George IV Bridge  
Edinburgh  
EH99 1SP

26 September, 2002

Consultation on Water Environment & Water Services Bill

Dear Callum.

My thanks for your recent request for further information to be supplied to the Transport and Environment Committee. I am assuming that the Committee will require this correspondence to be brief and have therefore attempted to illustrate some of the answers to the questions posed with examples which, whilst being limited in scope, will help to illustrate the points you refer to in your letter. To deal with the two issues you raised in your letter:

1. **Financial Implications Of Implementing Water Framework Directive**

Scotland enjoys a generally high standard of freshwater quality compared with much of Europe. However, there remain significant problems in Scotland which will, over the next 15 years, need to be identified, quantified and addressed by the Water Framework Directive (WFD). Fisheries managers are intimately involved in most of the issues concerning the quantity and quality of our freshwater environment and, whilst the perspective of fisheries may appear a narrow one, most fisheries management organisations are now having to view fisheries management very much from the perspective of management of catchments in acknowledgement of the fact that our rivers and lochs reflect the quality of the environment around them. In certain cases impacts on water quality originate beyond the catchment.

Being involved as we are managing freshwater environments we are also well aware of the costs associated with improvements to that environment. The principal cost is one of developing a monitoring programme to quantify, in a scientifically credible manner, the state of the freshwater environment and any indicator species such as salmonids. Currently in Scotland we now have near national coverage of Scotland by a network of fisheries trusts and boards linked by the Scottish Fisheries Co-ordination Centre (SFCC). These trusts/boards provide the data and the SFCC...
collates, analyses and stores that information. The SFCC is currently negotiating with SEPA over how this network might assist SEPA in assessing the impacts and pressures on aspects of the freshwater environment with WFD implementation in mind. This approach by SEPA is a recognition of the importance of data on fish stocks, their value as indicator species and the ability of this network to assist in the provision of that data. The SFCC which itself costs around £70k per annum and which is a partnership between the trusts/boards, the Scottish Executive and the Freshwater Laboratory, has 22 members and the cost of running this fisheries research and monitoring through the trust/board network is approximately £1.5m per annum (approx £75K per year per member). Much of this funding is sourced from the private sector with some grant in aid from SNH, Local Authorities, LECs etc.

In order for this network to continue to be able to provide data, recognised by SEPA as being of vital importance to the assessment of our freshwater environment, strategic support funding will be required, possibly through service level agreements, to ensure that important fisheries and related data continue to be made available at a cost that the public sector would find it very difficult to compete with.

I use this as an illustration of the sort of costs associated with simple monitoring and assessment processes. This however only allows one to assess what the problems might be. The WFD will demand not only that these problems are identified but that they are then corrected. Programmes to restore problems in freshwater can attract very substantial sums of money. For example:

- In South West Scotland the upper reaches of many of the rivers in Galloway run off poorly buffered geology. These areas were subject to substantial post-war coniferous tree planting programmes that, with the increasing incidence of acid rain over several decades, has resulted in pH values in large parts of the upper catchments of these rivers which are too low to support salmonids. This impact has been combined with other forestry related impacts such as transpiration (water removal by trees), sedimentation, obstruction to water courses and highly modified drainage regimes. In order to restore these systems to a state which would satisfy WFD requirements, funding will need to be found to support: forest re-structuring, liming and riparian habitat restoration. Organisations are committing considerable time and resources to targeted projects of restoration which themselves can cost hundreds of thousands of pounds. For example the LIFE funding projects for the salmon SAC on the river Bladnoch (Galloway) concentrating on restoring a small section of the upper Bladnoch has an estimated cost of £300,000. LIFE is a European fund supplying up to 50% matched funding for restoration projects on special areas of conservation (SACs) for species listed under Annex II of the Habitats Directive.

- The Association is currently heavily involved in a national LIFE funding bid covering many of the 17 salmon SACs (of which the Bladnoch is a part). This project is valued at approximately £3.5m over 3-5 years. Many of the projects identified in this bid are covering issues that will fall under the remit of the Water Framework Directive.

These projects, originating from an important but relatively narrow field of interest, will only address small parts of the overall problem and this may give an impression of the scale of funding required. SEPA and those other organisations (private and public sector) responsible for compliance with the Directive will need substantial sums to be made available to them over coming years.
For the purposes of this submission it is difficult to go into the detail and complexity of this subject but you will see from the sort of figures mentioned above that the costs of both identifying the problems in a scientifically credible way and then restoring freshwater systems to good ecological status as demanded by the Directive are formidable. Our network of organisations are extremely keen to play an active part in this programme, a role which we believe is recognised by SEPA and others. However, funding support for these organisations will be vital to ensure that they can continue to contribute meaningfully to this process, let alone the consideration that will need to be given to funding the restoration projects that will be identified by this work.

2. Transfer Of Planning Responsibility For Marine Aquaculture To Local Authorities

We would support the speedy transfer of planning responsibilities to Local Authorities for marine aquaculture through inclusion in this Bill. The current interim arrangements are workable but far from satisfactory and have led to uncertainty and delay in discharging this responsibility. Concurrent with this transfer of powers must be the consideration of how Local Authorities will acquire and fund the necessary expertise to assume effective planning responsibility. It will also be extremely important to ensure that there is some form of harmonisation of planning guidelines across the Local Authority network to ensure even decision making. There are currently no NPPGs for marine aquaculture and indeed not even for freshwater aquaculture for which Local Authorities already have responsibility. The lack of clarity over the current system neither serves the industry well nor those who have concerns about aspects of planning of marine aquaculture.

I would be happy to provide any further information the Committee might require.

Yours sincerely,

ANDREW WALLACE
Director, Association of Salmon Fishery Boards
Dear Mr Thomson

Thank you for your letter of 19 September seeking further information about the seaward limit of controls in England and the implications for management of the Solway.

I have consulted my colleagues in London but they have received no indication from DEFRA or the Environment Agency of what the limit is likely to be. The Solway Firth is, for the purposes of defining territorial waters, enclosed by a baseline which I understand is drawn from Meikle Ross in Galloway to St Bees Head in Cumbria. A median line divides the enclosed area between Scottish and English waters. In terms of the Bill, all the Scottish waters within the line will come within SEPA’s jurisdiction. I do not know what the position in the English sector will be. There is an area of the inner Solway which, I understand, is already designated under the Urban Wastewater Treatment Directive and I would be surprised if any of that area was to be omitted from the waters controlled under the Water Framework Directive.

I am sure that effective policing arrangements for the Solway Firth can be worked out between SEPA and the Environment Agency once the boundaries of controlled waters, and the western limit of the cross-border river basin district, have been established.

I am sorry I cannot shed any further light on this, but water management (as distinct from seabed management) is not really the Crown Estate’s area of specialism. I suggest that SEERAD or SEPA might be better equipped to advise the Committee.

Yours sincerely

Michael Cunliffe
Crown Estate
Callum Thomson
Clerk, Transport and Environment Committee
Room 3.5, Committee Chambers
The Scottish Parliament
Edinburgh
EH99 1SP
email callum.thomson@scottish.parliament.uk

Sept 2002

WATER ENVIRONMENT AND WATER SERVICES (SCOTLAND) BILL:
SNH EVIDENCE TO TRANSPORT AND ENVIRONMENT COMMITTEE

Thank you for your letter of 19 September, asking SNH to elaborate on two aspects of its evidence to the Committee on this Bill. I set out below our answers to your two questions.

1. Is it the understanding of SNH that the WFD requires a duty on Ministers to set out how they will exercise their functions with regard to the WFD requirements?

We are not experts on the interpretation of European law. As we understand the position, however, the WFD itself does not require a duty of this kind to be placed on Scottish Ministers. Member States have some flexibility in transposing European Directives. In our judgment it would be legally possible to set in place the structures, targets, planning, monitoring, etc necessitated under the WFD without a formal duty on Ministers.

SNH is nonetheless convinced that such a duty is essential for the efficient and effective implementation of the WFD in Scotland. In our written evidence we alluded to the roles and responsibilities of different bodies (including Ministers) in making policy for, regulating and funding activities in Scotland which have a strong bearing on ecological status. Bearing in mind these roles and responsibilities, we believe that unless the Bill bears upon Ministers it risks failing to deliver the effective framework for integrating different interests within a holistic approach to land and water management that is the Directive’s underlying goal and would be this legislation’s greatest achievement.

2. Please provide a more detailed explanation of the proposal from SNH that incentive charging be introduced to help pay for restoration and remedial measures.

I apologise if our phraseology has been the cause of confusion. All we had intended here was to capture the idea that new charging regimes and cost-
recovery schemes should be used not merely to penalise but also to act as incentives to drive forward better practice. Moreover we would like to see the resources made available targeted towards restoration work and the promotion of best practice.

For example, addressing diffuse pollution is likely to require action both at source (eg influencing emissions to the environment or land management practices, perhaps at some distance from the affected water bodies), and action to safeguard water bodies themselves through site-based management (eg establishment of buffer strips, implementation or avoidance of particular land management practices, etc). In both cases, the necessary improvements might require cross-compliance, as well as voluntary arrangements tied clearly to incentive regimes backed up by best practice guidance. Such best practice might be formalised as statutory ‘general binding rules’. Incentive schemes could take the form of ‘catchment challenge funds’ established from existing grant aid and incentive programmes administered by the Executive’s Agriculture Divisions, the Enterprise Network, Forestry Commission, Local Authorities and, potentially, SNH.

I hope that the Committee will find these clarifications helpful.

John Thomson
Director of Strategy and Operations