

**SEPA's consultation on its regulatory
method for handling applications
likely to result in significant adverse
impacts on the water environment**

Response to consultees

December 2008

1. INTRODUCTION

- 1.1 In March 2008, SEPA consulted on its regulatory method for handling applications for authorisation of controlled activities likely to have a significant adverse impact on the water environment. Under the Water Environment (Controlled Activities)(Scotland) Regulations 2005, anyone wishing to carry out a controlled activity, such as abstracting water from the water environment, undertaking engineering works in the water environment or discharging pollutants into the water environment requires an authorisation before they can do so. Most applications for authorisation concern activities that will not result in significant adverse impacts on the quality of the water environment. The method deals only with how SEPA handles the small proportion that do.
- 1.2 Thirteen bodies and organisations submitted comments and suggestions on the method following the consultation. Two indicated that they would like their views to remain confidential. The other eleven bodies and organisations are listed below.

Government bodies and Responsible Authorities	Non-Government bodies and businesses
Scottish Natural Heritage	Federation of Aquaculture Producers
Scottish Water	Scottish Canoe Association
Spey District Salmon Fisheries Board	Scottish Renewables and British Hydropower Association
SportScotland	Scottish Sports Association
Stirling Council	Scottish and Southern Energy
	Scottish Sustainable Energy Foundation

- 1.3 To date, the majority of the applications to which the method has applied have been for the controlled activities necessary for new hydropower schemes. This is reflected in the range of organisations who responded to the consultation and the comments they made.
- 1.4 This document is SEPA's response to the questions, concerns and suggestions of the respondees. Where a body or organisation indicated that its views were confidential, its comments are discussed but are not attributed.
- 1.5 The regulatory method was developed to help SEPA make objective and consistent regulatory decisions. Scottish Water agreed that the method went some way to ensuring consistency. The Federation of Aquaculture Producers, Scottish Sports Association, Scottish Canoe Association, SportScotland and Scottish Natural Heritage also broadly welcomed the method. However, this view was not shared by all respondees. In particular, respondees in the hydropower sector expressed concern that the method was weighted against hydropower development.

2. GENERAL COMMENTS AND SUGGESTIONS

2.1 Timing of public consultation

Scottish and Southern Energy recommended that the consultation be suspended until after the outcome of an appeal lodged against a decision by SEPA to refuse an application to construct and operate impounding works and to abstract water for the

purpose of operating a new hydropower scheme.

SEPA response

SEPA believes it would not be correct to delay making improvements to its methods until any appeals against specific decisions have been made. As a responsible regulator, SEPA believes it important to continually review and improve its regulatory methods to ensure its regulatory decision-making is based on methods encapsulating the best understanding and expertise reasonably available at the time each decision is made.

At the time of consulting, the regulatory method was relatively new. It was also intended for use in cases likely to generate significant public interest. In SEPA's view, it was both appropriate and beneficial to consult the public on the first full version of the method. Consultation is an important means by which SEPA can identify improvements to its methods.

SEPA takes its responsibilities with respect to statutory appeals very seriously. Where SEPA identifies revisions to a regulatory method that would have resulted in it making a different determination of an application that is subject to appeal, it would immediately inform Scottish Ministers of that fact.

Likewise, if the outcome of an appeal has implications for the regulatory method, SEPA would immediately update the method.

2.2 Scope of application of the method

One respondent suggested that the definition of water environment be limited to waters to which the objectives of the Water Framework Directive apply. The same respondent considered that the application of the method may not be proportionate if the deterioration in the quality of the water environment resulting from a proposed activity was insufficiently extensive to cause deterioration of the status of a water body.

SEPA response

The term 'water environment' is defined in the Water Environment and Water Services (Scotland) Act 2003. It includes all surface water and groundwater. SEPA believes it appropriate to refer to the term as defined in the 2003 Act and subsequently in the Water Environment (Controlled Activities) (Scotland) Regulations 2005. The definition of surface water and groundwater in the 2003 Act follow the corresponding definitions of 'surface water' and 'groundwater' in the Water Framework Directive.

SEPA is obliged to comply with the Scotland River Basin District (Surface Water Typology and Environmental Standards) (Scotland) Directions 2007. The Directions set out environmental standards and condition limits applicable to the protection of the water environment. Scottish Ministers issued a policy statement¹ in March 2007 explaining how SEPA is to apply the standards and condition limits in protecting the water environment.

The regulatory method has been designed to ensure that, where an environmental standard or condition limit would be failed if a proposed controlled activity were to be

¹ <http://www.scotland.gov.uk/Resource/Doc/173722/0048451.pdf>

authorised, the assessments SEPA undertakes are proportionate to:

- (a) the risk to the water environment and the interests of third parties; and
- (b) the difficulty of the decision at hand.

Where the risks are low or the decision straightforward, the method requires proportionately less information and analysis than in cases where the risks are high and the decision finely balanced. Where the deterioration caused by a proposal would be insufficient to affect the status of a water body, SEPA normally applies only two tests:

1. Has all reasonable mitigation been proposed to minimise the extent and severity of the deterioration? And
2. Do the benefits of the proposal outweigh its negative impacts?

SEPA believes these are reasonable, proportionate and appropriate tests in such cases.

2.3 Protecting the interests of other operators

Scottish Water did not agree with the principle of protecting other operators' water uses on a "first come, first served" basis.

SEPA response

SEPA believes that it is right that it should normally seek to protect the interests of existing operators against proposed developments. It also considers it appropriate that SEPA encourages developers to seek agreement with existing operators before applying to undertake controlled activities likely to affect the interests of those operators. There may be exceptional circumstances where agreement cannot be reached; alternative options are not reasonably practicable; and a convincing case has been made that a proposal provides overriding benefits to human health, the maintenance of human safety or sustainable development or that it would help achieve an environmental objective for the water environment without imposing disproportionate cost. In such circumstances, SEPA agrees that applying an inflexible "first come, first served" policy would be inappropriate.

2.4 Use of information and advice from third parties

Scottish Renewables and British Hydropower Association and another respondent believed that SEPA should not rely on the advice of single interests groups. The other respondent also suggested that the method explain clearly how, and with what weight, the advice of other bodies would be taken into account. Scottish Renewables and British Hydropower Association suggested that the opinions and decisions of other responsible authorities should form the basis of SEPA's assessments when applying the exemption tests.

SEPA response

SEPA does not agree that reliance on the advice of single interest groups should be ruled out. Indeed, some single interest groups can provide compelling evidence and unrivalled sources of expertise and data. This does not mean that SEPA should ignore the risk of bias in the advice and data it obtains from any source, including applicants. SEPA will not give unsupported assertions weight when reaching judgements on issues likely to be decisive factors in a determination.

Some of the information SEPA uses in making determinations is obtained using SEPA's powers under the Water Environment (Controlled Activities) (Scotland) Regulations 2005. Where SEPA has sought information using these powers, it is an offence for the person to make a statement which the person knows to be false or misleading in a material particular, or recklessly to make a statement which is false or misleading in a material particular.

Before determining an application, SEPA is required to consider all written representations made to it in response to the advertisement of the proposed controlled activity. SEPA also routinely consults, and has regard to the advice of, those Responsible Authorities and other public bodies likely to have a relevant interest in the proposal. However, it is SEPA's responsibility under the 2005 Regulations to assess and weigh up such representations along with the information supplied by the applicant when determining whether or not authorisation should be granted.

2.5 Making efficient use of existing sources of information

Scottish Water expressed concern about potential duplication of information needs with those required under the Environmental Impact Assessment Directive.

SEPA response

SEPA agrees that the information produced for the purposes of the Environmental Impact Assessment Directive (EIA Directive) can help in SEPA's assessments of proposed controlled activities. In applying the regulatory method, SEPA makes use of any relevant environmental information provided by developers for the purposes of meeting the requirements of the EIA Directive. As far as reasonably practicable, SEPA also provides advice to the competent authority for administering the requirements of the EIA Directive on the type and scope of environmental information it would like to see included in the information required of developers for the purposes of the EIA Directive.

2.6 Test for all practicable mitigation

Scottish Renewables and British Hydropower Association and another respondent suggested that mitigation for activities associated with proposed hydropower schemes should be limited to best available techniques (BAT).

SEPA response

When dealing with applications likely to cause deterioration of the water environment, SEPA requires, among other things, that all practicable mitigation is built into the applicants' proposals with the aim of minimising the deterioration. "BAT" has not been defined under any legislation for abstractions and impounding works associated with hydropower schemes. However, SEPA agrees that the mitigation required should be reasonable, represent good practice and be tailored to the particular environmental sensitivities of the affected part of the water environment. SEPA believes that this approach is consistent with the concept of BAT.

2.7 Editorial improvements

Many respondents made suggestions for minor corrections and clarifications, including recommendations on ensuring consistent use of terminology within the

method.

SEPA response

SEPA will edit the method documents as part of the process of incorporating the amendments described later in this response. The editing process will take account of the editorial suggestions made by respondents.

3. TESTS FOR OVERRIDING PUBLIC INTEREST AND SUSTAINABLE DEVELOPMENT

3.1 Overriding public interest

Scottish Water considered that SEPA should make decisions on whether a proposal is of overriding public interest. Scottish Renewables and British Hydropower Association and another respondent felt applicants should be able to appeal to Scottish Ministers for a decision on whether a proposal was of overriding public interest without having to first go through an assessment process with SEPA.

SEPA response

SEPA agrees that it is appropriate for it to make decisions on overriding public interest within the context of the policy framework set for it by Scottish Ministers (i.e. to the extent that the interest relates to issues of human health, the maintenance of human safety or sustainable development.

Where an applicant claims that their proposal is of overriding public interest for reasons that go beyond that context (e.g. national security or strategic economic importance), SEPA remains of the view that decisions on such matters are properly for Scottish Ministers to make.

SEPA considers that a proposal whose benefits do not outweigh the benefits to the environment and to society of protecting the water environment would not represent sustainable development and hence could not provide benefits to sustainable development that are of overriding public interest.

3.2 Activities constituting a sustainable development activity

Two respondents suggested that the guidance on what might constitute a sustainable development activity was not exhaustive. Scottish Renewables and British Hydropower Association thought the guidance could exclude proposals with greater positive than negative benefits and was inconsistent with statutory guidance given to SEPA made under the Environment Act. One respondent felt that further reference should be made to the social and economic benefits of the activity to properly measure the sustainability of a development.

SEPA response

SEPA aims to act in the way best calculated to contribute to the achievement of sustainable development. It does this in a number of ways. For example, environmental standards and condition limits help define the carrying capacity of the water environment to accommodate abstractions, discharges and other controlled activities without significant

adverse effects on the structure and functioning of aquatic ecosystems. SEPA promotes sustainable use of the water environment by seeking to ensure proposed controlled activities do not cause failures of environmental standards and condition limits. It also seeks to ensure activities adopt good practice so as avoid inefficient use of the available carrying capacity and hence unnecessary constraints on future development.

Carrying capacity provides an important link between environmental protection and sustainable development. Proposals that result in the carrying capacity of an environmental system being exceeded are unlikely to be sustainable, especially if this continues long-term. The regulatory method deals with the small sub-set of proposed controlled activities that, if authorised, would cause failures of environmental standards or condition limits and hence exceed the carrying capacity of part of the water environment. This sub-set of proposals can include activities serving important beneficial purposes and which, despite causing carrying capacity to be exceeded, may in SEPA's view represent sustainable development. SEPA therefore considers proposal's likely to cause failures of environmental standards or condition limits on their own merits. To this end, the regulatory method ensures that consideration is given to the full range of positive and negative social, economic and environmental impacts expected to result from such proposals.

The method also provides a non-exhaustive list of examples of proposed activities which may represent sustainable development despite causing deterioration of the water environment. The list includes proposals:

- (a) serving a purpose that provides other environmental benefits that offset the adverse impacts on the water environment;
- (b) whose adverse impacts on the water environment will not be long lasting; and
- (c) serving a purpose providing important social benefits that could not reasonably be delivered by another means.

3.3 **Hydropower and sustainable development**

Scottish Renewables and British Hydropower Association suggested that the guidance explicitly acknowledge hydropower as sustainable development. Scottish Sustainable Energy Foundation felt that each hydropower scheme should be judged on its merits.

SEPA response

SEPA agrees that hydropower is a sustainable form of electricity generation. However, this does not mean that every proposed new hydropower scheme would necessarily constitute sustainable development. SEPA believes that each scheme has to be considered on its merits. For example, SEPA does not believe a scheme would qualify as sustainable development if its negative social, economic and environmental impacts outweighed its positive impacts.

4. WEIGHING UP THE POSITIVE AND NEGATIVE IMPACTS OF A PROPOSAL

4.1 Weighting for scale of development

Two respondents felt the method was weighted against small scale development.

SEPA response

The method weighs up the benefits expected from a proposal versus the benefits that would be foregone as a result of the proposal's adverse impact on the water environment. In such an analysis of costs and benefits, provided both the costs and benefits vary directly in proportion to the scale of development, the outcome is not biased in favour of any particular scale of development. In general, small scale developments tend to have correspondingly less significant negative impacts than large scale developments.

To date, SEPA has determined and granted nearly 30 applications using the method, including hydropower, public water supply and flood alleviation schemes. These have included small scale and large scale developments.

4.2 **Relevance of different factors**

Scottish Renewables and British Hydropower Association and another respondent recommended that the guidance make clear that the only relevant impacts on the different social, economic and environmental factors listed in the method are those resulting from the change in the condition of the water environment.

SEPA response

The only impacts taken into account when determining an application are those caused by the proposed controlled activities. Most development projects also involve works that are not controlled activities. Such works are not relevant to SEPA's determination of applications. This is already noted in the method. However, SEPA agrees it is a point worth highlighting further.

4.3 **Weighting of different factors**

Scottish and Southern Energy, Scottish Renewables and British Hydropower Association and another respondent believed that the weighting given to different impacts is far from equivalent.

SEPA response

SEPA agrees that identifying appropriate weightings is necessary if the method is to assist SEPA in striking the right balance between different interests. Different interest groups would reasonably wish to weight highest those factors of most concern to their interests. The aim of the method is to weight factors in an as objective, balanced and unbiased way as possible. As a consequence, it is unlikely that the weightings will always align with those favoured by different interest groups.

In developing the weightings, SEPA considered Government priorities to help identify factors, such as climate change impacts and economic growth impacts, that are of national and, hence, high importance. Interests that are of more local in character tend to be ranked by the method as of low importance.

SEPA has reviewed weightings of some of the factors in the light of specific consultation responses. Further information on revisions to the weightings can be found in later sections of this response. However, to date SEPA has authorised the controlled activities necessary for over 25 hydropower schemes using the method. If the method's weightings for different factors are far from equivalent, it does not appear to be to the detriment of those wishing to use the water environment for hydropower generation.

4.4 Combining assessments of impacts on different factors

Scottish Canoe Association recommended further development of guidance on how to weigh up positive and negative impacts where a proposal would have impacts on a multiple factors.

SEPA response

The method currently provides general guidance on how to weigh up positive and negative impacts where impacts on multiple factors are involved. However, to date few cases have involved impacts on more than two or three factors. In fact, reaching a conclusion on the balance of impacts has often proved to be a matter of finely judging the balance between a positive and a negative impact of very similar significance. SEPA does not believe that any system for combining results of assessments of impacts on different factors would remove the need for fine judgements to be made where the balance of positive and negative impacts is close.

4.5 Role of social and economic impacts

Scottish Canoe Association, Scottish Natural Heritage, Scottish & Southern Energy, Scottish Sports Association, Spey District Salmon Fishery Board, and SportScotland agreed with the principle of considering the interests of other users of the water environment and, in particular, recreational interests.

Scottish Renewables and British Hydropower Association and another respondent questioned whether consideration of social and economic impacts on third parties was relevant when determining if an exemption under Article 4.7 of the Directive could be applicable. These respondents went on to suggest that such impacts should be considered by Scottish Ministers in relation to hydropower developments requiring consent under the Electricity Act 1989 or by Local Authorities in relation to developments requiring planning permission.

SEPA response

The application of Article 4.7 of the Water Framework Directive requires consideration of the social and environmental benefits of preventing deteriorations of status. SEPA believes that social benefits can arise from the use of the water environment for recreation. This view is in accordance with guidance endorsed by the European Commission and Member States as part of the European Common Implementation Strategy for the Directive. It also reflects the position set out by Scottish Ministers in their policy statements on implementing the Water Environment & Water Services (Scotland) Act 2003². SEPA believes that consulting third parties is an important way of assessing economic and social costs and benefits.

SEPA is obliged by the Water Environment (Controlled Activities) (Scotland) Regulations 2005 to apply the requirements of the Directive when determining applications for authorisation of controlled activities. The wording of the Water Environment (Controlled Activities) (Third Party Representations etc) (Scotland) Regulations 2006, which amended

² <http://www.scotland.gov.uk/Resource/Doc/160640/0043671.pdf>;
<http://www.scotland.gov.uk/Resource/Doc/173709/0048450.pdf>

the 2005 Regulations, also makes clear that SEPA should consider the interests of other users of the water environment. Scottish Ministers issued a policy statement³ in December 2006 to accompany the 2006 Regulations. This sets out how third party interests are to be considered in connection with a proposal as a way of assessing the proposal's social and economic impacts. More generally, SEPA is required by the Water Environment and Water Services (Scotland) Act 2003 to have regard to the social and economic impact of the exercise of its functions under the Water Environment (Controlled Activities) (Scotland) Regulations 2005.

5. ECONOMIC IMPACTS

5.1 Importance of economic impacts

Scottish Water, Scottish Renewables and British Hydropower Association and two other respondees questioned why the method appeared not to take into account impacts on local and/or regional economies.

SEPA response

The method assesses impacts on employment and impacts on economic growth separately. Scottish Ministers have indicated that their priority is for sustainable economic growth. Because of this, the method assumes that all impacts that affect economic growth are of national importance whatever their magnitude. Impacts of national importance are also likely to be of local and regional importance. The logic of the method is that, when assessing the significance of an impact (i.e. magnitude x importance), only the highest importance applicable to the impacted factor (i.e. national and hence 'high' in this case) is used. This ensures that:

- (a) the significance of the impact is not underestimated; and
- (b) the impact is not double counted.

SEPA also believes it would be difficult to assess the local and regional economic impacts of a proposal because of the challenges of estimating the fraction of money generated by an economic activity that is circulating at anyone geographical level; and of consistently defining 'local' and 'regional' economies.

5.2 Weighting of cumulative economic benefit of hydropower schemes

Scottish Renewables and British Hydropower Association suggested that more weight be given to the economic benefit of hydropower schemes, which it considered were cumulatively important

SEPA response

Whilst, SEPA agrees that the cumulative economic benefit of hydropower schemes is greater than the economic benefit of individual schemes, it does not consider that this merits more weight being given to the economic benefit of an individual scheme. The specific benefits accruing from a proposed scheme have to be weighed against that

³ <http://www.scotland.gov.uk/Resource/Doc/160640/0043671.pdf>

individual scheme's adverse impacts. For the reasons given in section 4.1, SEPA does not consider its method to be biased in favour of small or large schemes.

5.3 Weighting of economic impact of aquaculture

The Federation of Scottish Aquaculture Producers felt that the method under-valued the economic significance of aquaculture. It believed that most individual sites would score as of very low significance to the Scottish economy.

SEPA response

As noted in section 5.1 above, the method separates economic benefits from the social benefits which may arise from the employment provided by a water use. Consequently, although the economic significance of a proposal may be relatively low, the social benefits it provides could be of much greater significance (e.g. providing employment opportunities in parts of Scotland where, or for groups of people for which, there are few alternative employment opportunities).

The smaller the scale of a proposed development, the smaller its adverse impacts are likely to be. Even though the benefit of a proposed water use may be of low or very low significance, it may well outweigh the associated adverse impacts.

5.4 Economic benefit of sports

Scottish Sports Association suggested that the method should take account of the economic benefit of sports tourism and of the staging of sporting events.

SEPA response

SEPA agrees that positive or negative impacts on sports tourism or the staging of sports events should be taken into account. SEPA will ensure that the method makes more explicit that where such impacts could be significant, they are appropriately taken into account.

5.5 Method used to assess relative economic significance

Scottish Water suggested that the use of profit is inappropriate for assessing the economic significance of not-for-profit organisations. It recommended that consumer surplus would be a better measure. It also argued that the guidance on assessing economic impacts should include the concepts of willingness to pay, the benefits that people receive from the activity and reference to the multiplier effect that is observed from new economic activities. Another resposdee was also unclear on the role of GVA in the method.

SEPA response

Organisations that are not-for-profit do not generate direct economic benefits so they do not have a direct economic impact. They may well have an indirect economic impact and SEPA agrees that this should be taken into account. SEPA will seek to develop a method for assessing such impacts and will seek the advice of Scottish Water in doing so.

The method for assessing the direct economic impact of proposals uses gross value added (GVA) rather than gross domestic product (GDP) because GVA is the standard measure for the contribution to the economy of companies and sectors. The method uses

sector-level information to estimate the contribution different sizes of business in different sectors make to GVA.

The method does not require information on consumer surplus or the application of willingness to pay (WTP) methodologies. This is because the method is designed to account in qualitative terms for the full range of impacts that a new development might have. Requiring a WTP study for each proposal would substantially increase costs for applicants. SEPA is not convinced that such additional cost would be justified in terms of the benefits to the decision-making process.

6. EMPLOYMENT IMPACTS

6.1 Weighting given to social impacts

SportScotland recommended greater emphasis be given to social impacts. Another respondent suggested that insufficient weight was being given to employment benefits.

SEPA response

SEPA agrees that providing employment in areas where, or to groups for which, alternative employment opportunities are limited is an important social benefit. The method already recognises this and takes it into account by assessing positive and negative impacts on vulnerable or disadvantaged groups. The latter include groups in areas with limited employment opportunities. SEPA will keep under review how effectively the method takes account of employment impacts in practice and where necessary develop further guidance to staff.

7. CLIMATE CHANGE IMPACTS

7.1 Importance of climate change impacts

Scottish Renewables and British Hydropower Association suggested that the importance of renewable energy projects should not be distinguished by scale. All schemes should be considered as making an important contribution to tackling climate change.

SEPA response

To enable the positive and negative impacts of any proposal to be weighed up, some means of describing the relative scale of those impacts is needed. The method makes the assumption that the relative significance of climate change benefits provided by a renewable energy scheme depends on the quantity of renewable energy that would be generated by the scheme. The method considers renewable energy generation per se to be of national importance. Nevertheless, SEPA believes that the relative significance of different schemes' contributions to renewable energy generation can and should be ranked for the purposes of enabling the balance of positive and negative impacts to be assessed.

7.2 Application of Scotland's renewable energy targets

Scottish Renewables and British Hydropower Association, Scottish and Southern Energy and another respondent pointed out that the renewable energy targets referred to in the method were out of date. Scottish and Southern Energy were concerned that scaling the significance of the climate change benefit of a hydropower scheme in terms of the contribution it makes to achieving renewable energy targets would mean that, as the targets are increased, the significance attributed to an individual scheme would be downgraded.

SEPA response

SEPA will update the method so that reference is made to the national renewable energy targets introduced by the current Scottish Government.

The significance bands for classifying the relative significance of climate impacts were calibrated on the basis of:

- (i) percentage contributions to the achievement of the last Scottish Government's renewable energy targets; and
- (ii) the quantity of energy produced by the largest contemporary renewable energy schemes (i.e. large wind farms) - so that the upper end of the scale is set relative to schemes currently making the greatest contributions to achieving renewable energy targets.

These considerations helped provide a context for ranking significance. However, the bands so derived were deliberately specified in terms of quantities of renewable energy produced per year in gigawatt hours rather than as percentages of renewable targets. This was done so that the significance of a particular scheme would not be automatically downgraded if Government targets are increased - as it would if the bands were expressed as percentages of Government targets. More ambitious renewable energy generation targets are taken to imply an increase in the national importance given to renewable energy production. Accordingly, the significance bands now correspond to proportionately smaller percentage contributions to the targets introduced by the current Scottish Government.

7.3 Weighting given to climate change benefits

Scottish Renewables and British Hydropower Association and Scottish and Southern Energy suggested that no existing hydropower schemes would be ranked as being of high or very high significance. Scottish and Southern Energy considered the weight given to climate change benefits of hydropower schemes was too low and that the majority would be considered by the method to be of very low significance. Another respondent also indicated that it felt greater weight should be given to the climate change benefits of hydropower developments.

Scottish Canoe Association considered that the assessment matrices for ranking the significance of the climate change benefit of hydropower schemes gave the appropriate weight to small schemes. The Scottish Sustainable Energy Foundation stated that it did not believe there should be a presumption in favour of hydropower development and that each scheme should be judged on its merits.

SEPA response

According to figures published by electricity companies, the output of at least seven existing hydropower schemes in Scotland places them in the 'high' significance band. The largest new hydropower scheme for which SEPA has authorised the necessary controlled activities is Scottish and Southern Energy's new Glendoe scheme. According to information provided by Scottish and Southern Energy, this scheme is expected to have an annual energy output of 150 gigawatt hours per year. This would place it in the 'high' significance band.

On balance and taking into account the high priority given to renewable energy generation as reflected by the Scottish Government's new targets, SEPA has revised its significance bands. The new bands are described in Table 1 below. The new boundary for the lowest significance band has been benchmarked to the typical average annual output of a single 1.8 megawatt wind turbine. The boundaries for the high and very high significance bands have also been adjusted.

Table 1: Revised indicative significance bands for assessing climate change impacts

	Very low	Low	Moderate	High	Very High
Average net increase in renewable energy generated per year (GWh)	< 4.7	4.7 to < 20	20 to < 120	120 to < 200	≥ 200
Benchmark comparators for climate change significance bands					
Approximate proportion of previous Scottish Government's 2010 target (%)	< 0.05	0.05 to < 0.22	0.22 to < 1.31	1.31 to < 2.2	≥ 2.2
Approximate proportion of Scottish Government's 2011 target (%)	< 0.04	0.04 to < 0.15	0.15 to < 0.9	0.9 to < 1.54	≥ 1.54
Approximate proportion of Scottish Government's 2020 target (%)	< 0.02	0.02 to < 0.1	0.1 to < 0.56	0.56 to < 0.95	≥ 0.95
Approximate number of 1.8 MW wind turbines	< 1	2 to < 4.3	4.3 to < 25.5	25.5 to < 40	≥ 40

7.4 SEPA and climate change

Scottish and Southern Energy and Scottish Renewables and British Hydropower Association considered it complacent to suggest that the direct effect of renewable energy schemes on global emissions was negligible. Another respondee also

objected to this suggestion. Scottish and Southern Energy thought that climate change impacts should be considered as of international importance.

SEPA response

SEPA is not at all complacent about climate change. The wording of the method will be changed to avoid any possibility of this misapprehension.

The method attempted to set out why SEPA used contribution to the Scottish renewable energy targets rather than direct effect on climate or global emissions to calibrate the method's significance scale for assessing climate change benefits. The benefit of individual renewable energy schemes in Scotland would not be measurable in terms of any direct effect on climate. This is because no current climate models can predict the climate effect of small changes in global carbon emissions. It was also considered difficult to calibrate the significance of such schemes in terms of change in total global emissions of greenhouse gases. According to data published by the Intergovernmental Panel on Climate Change, global emissions of greenhouse gases in 2004 were 49 billion tonnes of carbon dioxide equivalents per year and rising. Renewable schemes in the lowest significance band would reduce global emissions by around 2,000 tonnes of carbon dioxide per year or 0.000004 % of 2004 emissions.

SEPA agrees that climate change is an internationally important issue. However, SEPA remains of the view that an assessment of the significance of individual renewable energy schemes is best made by considering their contribution to Scotland's national effort to play its part in delivering the global action needed to address climate change.

8. RECREATION IMPACTS

8.1 Consultees on recreation impacts

Scottish Sports Association, SportScotland, Scottish Natural Heritage, Scottish Renewables and British Hydropower Association and another resposdee made various suggestions for additional bodies which they thought it appropriate for SEPA to consult on potential impacts on recreation interests.

SEPA response

SEPA will revise the method so that Local Authorities, SNH and, where applicable, National Park Authorities are consulted wherever there are potentially significant impacts on recreation interests.

The method will also identify that sports governing bodies may be consulted in cases requiring specialist information to help assess the significance of positive or negative impacts.

8.2 Sports interests of SEPA staff

One resposdee suggested that all SEPA staff who are members of a sports governing body or who participate in a sport should be listed on the public register and be barred from taking part in the determination of any case involving impacts on

that sport.

SEPA response

SEPA considers that its internal procedures governing its determinations of applications ensure that a balanced corporate view is reached. All draft determinations of applications likely to cause deterioration of the water environment are subject to peer review by one or other of SEPA's Regulatory Review Teams. The draft determinations are also reviewed by SEPA's Derogation Support Group to ensure the exemption tests have been properly and consistently applied. The regulatory method itself is aimed at providing a consistent and objective framework for assessing the positive and negative impacts of such proposals. SEPA also consults with, and takes account of the views of, other bodies on recreation impacts.

SEPA's also has an internal policy on employee code of conduct. This specifies that all employees are responsible for ensuring that they are not placed in a position which risks, or appears to risk, conflict with their Scottish Environment Protection Agency duties. Under the policy, employees have to declare conflicts of interest to their line managers.

8.3 Development of assessment matrices for impacts on other recreational interests

Spey District Salmon Fishery Board, Scottish Sports Association, Scottish Canoe Association, SportScotland, Scottish Natural Heritage and another resposdee suggested developing criteria for assessing the significance of positive and negative impacts on other recreational activities in addition to river canoeing. Scottish Renewables and British Hydropower Association also questioned why the method appeared to single out canoeing.

Scottish Natural Heritage offered to help in developing matrices for other recreational activities. The Scottish Sports Association and SportScotland suggested that each sport should contribute to developing assessment matrices in partnership with SEPA.

SEPA response

SEPA welcomes the offers of help to develop assessment matrices for other recreational activities. SEPA intends to take up these offers in due course. This work will be prioritised in relation to conflicts with recreational interests identified in relation to proposed controlled activities.

The method currently includes an assessment matrix for river canoeing because conflicts with this recreational activity have already arisen. To date very few applications to undertake controlled activities have posed potentially significant risks to other recreational interests. Work to develop assessment matrices for assessing impacts on the amenity value of water features known to attract walkers and sightseers is being progressed.

In the interim, the method identifies a number of other recreational activities which have the potential to be affected by controlled activities and which should therefore be considered where relevant. SEPA will amend the guidance to make clearer that this list is not intended to be exhaustive.

8.4 **Impact on river canoeing - week day use**

Whilst giving broad support to the assessment matrices for impacts on river canoeing, the Scottish Canoe Association, Scottish Natural Heritage and SportScotland suggested that the method recognise that mid-week canoeing at some sites can be important.

SEPA response

SEPA accepts that weekday use may be important for commercial parties, university clubs, holidaymakers and any other canoeists able to visit a site during the week (e.g. on summer evenings when daylight permits). Accordingly, SEPA will remove the methods general distinction between losses of opportunity for canoeing on weekdays verses weekends. Instead, the method will be amended such that a distinction may be made where there is reasonable evidence to suggest that weekday use is substantially less important.

8.5 **Magnitude thresholds for assessing canoe impacts**

Scottish Canoe Association felt that the boundary between medium and large magnitude impacts (40 % reduction in the number of days on which canoeing could be undertaken) is set too high.

SEPA response

SEPA is not convinced that the boundary between medium and large magnitude impacts is set too high. The large magnitude band stretches from a 40 % to an 80 % reduction in the number of days on which canoeing could be undertaken. Reducing the threshold between medium and large magnitude impacts would result in this band being greatly out of proportion to the other bands.

8.6 **Weighting of summer scrape levels**

The Scottish Canoe Association recommended that increased weight be given to summer scrape levels.

SEPA response

The method currently assumes a slightly greater magnitude of impact for reductions in the number of days on which river flows are greater than scrape levels than for reductions in the number of all days at which flows are at scrape levels or better.

SEPA will revise the assessment method to remove this distinction unless there is evidence that scrape levels are of lower value for canoeing on the river concerned.

8.7 **Criteria for assessing the importance of a river for canoeing**

Scottish Canoe Association would like the grade of river to be taken into account. SportScotland recommended that the assessment of whether a site is of regional importance should take account of its value in terms of providing for training and competition purposes at a regional level, and as a venue for club use. It also suggested that use by disabled people, ethnic minorities and, in some cases, women and young people should be taken into account. SportScotland's recommendations were also supported by the Scottish Sports Association.

SEPA response

SEPA agrees that the sport of canoeing requires the challenges of different grades of river. Although the term 'grade' is not used, the method's assessment of the importance of a river for canoeing takes into account the type of challenge offered by the river. SEPA will amend the method to make clear that the type of challenge can be indicated by the graded difficulty of the river for canoeing.

SEPA agrees that the use of a river for training and competition purposes and as a venue for club use can act as an indicator of the river's value or importance as a recreational resource. SEPA will amend the guidance to include this as one possible indicator of the relative importance for canoeing.

8.8 Safety and recreational interests

Scottish Canoe Association suggested that safety issues for recreational water users associated with the design and operation of hydropower schemes should be considered when assessing hydropower proposals.

SEPA response

In principle, SEPA thinks it would be reasonable to take account of any effects of a proposed controlled activity that would make a recreational use significantly more dangerous. Such effects would reduce people's opportunities for safe recreation. In relation to hydropower proposals, SEPA suggests that discussion with the Scottish Canoe Association and representatives of the hydropower sector would be beneficial in improving understanding of how such proposals could make river canoeing significantly more dangerous.

8.9 Pre-identification of sites of importance for canoeing

Scottish Natural Heritage recommended the development of a ranking system for canoe sites with the help from the Scottish Canoe Association and the Forum for Renewable Energy Development in Scotland.

SEPA response

SEPA supports the identification of a list of rivers that are of special national or regional importance for canoeing. This would be of benefit to developers, SEPA and canoeing interests. SEPA has already discussed such a ranking system with interested parties and will seek to take the idea forward in due course.

8.10 Use of potential canoe days in the assessment method

Scottish Renewables and British Hydropower Association suggested the weight given to impacts on river canoeing was too great because of the use of potential canoe days lost rather than actual canoe days lost. Scottish and Southern Energy also considered that loss of potential canoe days was not a true measure of significance. Another respondent also argued that actual use rather than potential use should be used in the assessment and that the idea of canoe days was flawed as flows would not necessarily be at the necessary level for the whole day.

SEPA response

The method does not directly equate the significance of an impact on canoeing to the loss

of 'potential' canoe days. A river that, in principle, is navigable by canoe for 300 days per year on average will have 300 potential canoe days per year. However, if the river is not used by canoeists, the method would assess the river as having no importance for canoe recreation. The significance (magnitude x importance) of a 100 % reduction in potential canoe days on that river would be zero. 'Potential canoe days' is related to the natural characteristics of the river and can be objectively measured. Actual use is one of several factors of relevance in deciding the importance of the river for canoe recreation.

SEPA's method uses reduction in potential canoe days as a measure of the magnitude of the impact experienced by someone wishing to canoe a river. Suppose the river in the above example is used for canoeing. A person wishing to canoe the river has the opportunity to do so on any day, or days, of the 300 on which it is navigable during a year. Suppose the person is told she can only canoe on 30 days per year. She will then be ten times less likely to be able to make use of the recreational resource on a day that fits with her other commitments. If she wants to canoe when the river is at particular flow levels, the few days per year on which flows are now at that level may mean she has little chance of matching up the right flow day with a day on which she is free of other commitments. The method assumes that the curtailment of people's opportunity to use a recreational resource constitutes an adverse impact on their interests and hence 'reduction in potential canoe days' is a reasonable and measurable indicator of impact on those interests.

The use of 'potential canoe days' is not intended to mean that the river is navigable by canoe for the full 24 hours of each such day. SEPA assumes that most white water rivers are unlikely to be safely navigable during the hours of darkness. Because the method uses data on daily mean flows, some number of the days identified as potential canoe days will have flows below navigable levels for part of the day. There will also be some days considered not to be potential canoe days that have navigable flows for part of the day. SEPA believes that the use of daily statistics provides a reproducible and reasonable accurate estimate of the long-term average potential for the canoeing during daylight hours. Requiring a finer resolution would pose significant difficulties for both the developer and SEPA as the required long term flow data on sub-daily flows is not commonly available for rivers in Scotland.

9. IMPACTS ON BUILT & CULTURAL HERITAGE

9.1 Contacts for advice on built and cultural heritage interests

Stirling Council asked that it be identified as a source of advice where there may be potential impacts on built and cultural heritage interests within its area.

SEPA response

The guidance will be amended to identify Stirling Council as a potential source of information and advice in cases within its area that may pose a risk to built or cultural heritage interests.

10. WATER ENVIRONMENT IMPACTS

10.1 Weighting of impacts on the water environment

Scottish and Southern Energy felt that the weight given to impacts on the water environment would normally result in such impacts being assessed as outweighing the climate change benefit of proposed hydropower schemes. Scottish Renewables and British Hydropower Association also thought that impacts on the water environment would be over-weighted compared with climate change benefits.

In contrast, the Spey District Salmon Fishery Board suggested that the method would not properly account for cumulative impacts on the water environment across a river basin.

SEPA response

The evidence from the results of applying the method is that it has not over-weighted impacts on the water environment. To date, SEPA has determined over 25 proposals relating to new hydropower schemes using the method. In all but one of these cases, the benefit of the proposal to sustainable development was judged to outweigh the sum of the adverse social and environmental impacts - which included, in each of those cases, adverse impacts on the water environment.

SEPA does agree that the assessment matrices for impacts on the water environment would benefit from further development. Currently, the matrices are based on qualitative descriptions. SEPA will amend the matrices to include criteria based descriptions of impact categories. This will help provide a more structured and consistent means of describing the magnitude of impact on the water environment. An initial amended assessment matrix for assessing the magnitude of impacts on rivers is set out in Table 2 below. SEPA will continue to develop this assessment matrix as data and understanding improve. The significance of different magnitude impacts will be judged in the context of the relative importance of the river concerned. SEPA will use its data on the ecological-relevant characteristics of the rivers to help improve its assessment of their relative importance. SEPA will develop and apply similar criteria-based assessment matrices for lochs in due course.

Table 2: Revised indicative guide to assessing the magnitude of an impact on rivers

Ranked scale of change in terms of environmental standards met*	Length of river affected (km)					
	< 0.5	0.5 to < 1.5	1.5 to < 5	5 to < 10	10 to < 20	≥ 20
Column 1	Column 2	Column 3	Column 4	Column 5	Column 6	Column 7
H → G	N	VS	VS - S	S - M	M	M - L
G ↔ M M ↔ P H → M P ↔ B	N - VS	VS - S	S	M	M - L	L
H → P G ↔ P	VS	S	M	M - L	L - VL	L - VL

M ↔ B						
G ↔ B	S	S - M	M - L	L	L - VL	VL
H → B						

Notes to Table B

*This relates to the expected change in ecological quality of the affected length of river independent of the effect of that change on the ecological status of the water body. For example, a change from 'high' to 'good' 'moderate', 'poor' or even 'bad' (in terms of environmental standards failed) in less than 0.5 km of a river is unlikely to affect the status of a water body.

Key: In columns 2, 3, 4, 5, 6 and 7 "N" means "negligible"; "VS" means "very small"; "S" means "small"; "M" means "medium"; "L" means "large"; and "VL" means "very large". In column 1, "H" means a standard for high is met; "G" means a standard for good is met; "M" means a standard for moderate is met; "P" means a standard for poor is met; and "B" means a standard for poor is failed.

11. LANDSCAPE

11.1 Role of landscape impacts in assessments

Scottish Canoe Association and SportScotland suggested that the quality of the landscape should be considered as a factor influencing recreational enjoyment. SNH supported consideration of landscape which it sees as being important economically and socially - particularly in relation to recreational enjoyment.

Another respondee suggested that landscape and aesthetics have nothing to do with the water environment and are therefore not relevant in assessing recreational impacts. The same respondee also felt that the method for assessing landscape was not a recognised landscape assessment method.

SEPA response

SEPA agrees that the quality of the landscape can affect the economic and social value of the water environment. It also believes that changes to the appearance of the water environment could impact on protected landscapes such as National Scenic Areas if the landscape interest of those areas includes the appearance of the water environment. SEPA will take account of impacts on the quality of the landscape as follows:

- (a) for protected landscapes whose water environments are identified as contributing to their landscape quality, SEPA will take into account the significance of any positive or negative impacts on the landscape quality of those water features resulting from a proposal. SEPA will work with SNH to harmonise the assessment matrices it uses for this purpose with the standard methods used by SNH;
- (b) where the appearance of the water environment is an important factor for recreational interests, SEPA will take account of the potential impact of changes to that appearance on those recreational interests; and
- (c) where there is reason to believe that the appearance of the water environment is a relevant factor in the economic use of an area (e.g. areas requiring regeneration) , SEPA will take account of positive or negative impacts on the appearance of the water environment caused by controlled activities.

12. BIODIVERSITY IMPACTS

12.1 Assessment matrices for impacts on biodiversity

SNH suggested improvements to the guidance on assessing impacts on biodiversity, including guidance on the circumstances in which SNH can provide advice.

SEPA response

SEPA has revised the method's guidance on assessing impacts on biodiversity following further discussion with SNH. The revised guidance is set out in Annex 1 to this document.

13. TEST FOR SIGNIFICANTLY BETTER ENVIRONMENTAL OPTIONS

13.1 Default list of potential options to be considered

Scottish Water agreed with the alternatives to be considered in relation to point source discharges and proposals relating to public water supply.

Scottish Renewables and British Hydropower Association and another respondent did not agree with the default list of alternatives identified in the method in relation to proposed new hydropower schemes. Both felt that only options within the catchment area of the development and within the means of the developer to develop should be considered. The other respondent also did not believe that different types of renewable energy technologies should be set against each other.

SEPA response

SEPA believes the list of alternative options in relation to hydropower proposals follows agreed European guidance on the implementation of the Water Framework Directive.

SEPA is not convinced that only alternative options within the catchment of the proposal should be considered. This view is consistent with the decision earlier this year by Scottish Ministers regarding the Lewis Windfarm proposal. In making their decision, Ministers did not restrict consideration of alternatives to other sites in the near vicinity of the original proposal. SEPA considers that arbitrarily restricting alternative options to the catchment of the proposal could be challenged as circumscribing the Directive's derogation tests. These tests do not specify any such catchment-based restriction. SEPA believes that potential alternative options are those that could:

- (i) be implemented within the UK - at least in principle; and
- (ii) deliver comparable benefits to that of the proposal.

For example, the method measures the climate change benefit of hydropower proposals in the context of Scotland's renewable energy targets. This means that only alternative options that have the potential to be implemented in Scotland and hence contribute to achieving those targets are relevant. Other proposals may provide benefits that limit the geographic location of alternative options further still. For example, if the benefit of the proposal is to defence against river flooding, any alternative options would have to be

located in the relevant river catchment in which the flooding of concern occurs.

SEPA is also not convinced that an alternative option must be within the means of the developer to deliver. If there is a functioning market (e.g. not a monopoly) for an alternative option's benefits (i.e. equivalent benefits to those of the proposal), developers are able to compete to develop the option. In such circumstances, the development of the alternative option by the proposer of the controlled activities would not necessarily be the only or most economically efficient means by which the alternative option could be delivered.

SEPA does not believe the method sets one renewable technology against another per se. The method is based on the logic that there cannot be a significantly better environmental option if adverse impacts of a proposal are not of at least moderately high significance. If the environmental costs of a proposal are of low or very low significance, the impacts of other options may be lower but they cannot be significantly lower. As a result of this logic, the method does not involve arguments in principle about which type of renewable technology has greater environmental costs than another. Instead the logic is: *"Because the adverse impacts are particularly significant in this case, could the same benefits be delivered for significantly less environmental cost by another form of renewable energy technology?"* In this context, the method restricts the scope of other forms of renewable energy to comparable and established technologies. For example, wind power would not be considered a potential other means when the test is being applied to proposals for hydropower schemes with significant water storage.

To date, SEPA has applied the test for significantly better environmental options to around fifteen applications for the controlled activities necessary for new hydropower schemes. All but one scheme was judged as passing the test (i.e. there were no significantly better environmental options).

13.2 Meaning of a better environmental option

One respondent suggested that the criteria 'environmental' in the Directive's phrase 'significantly better environmental option' refers only to water body status and does not include socio-economic impacts. According to the respondent, the implication of this is that alternative options should be to address the environmental impacts not the socio-economic impacts of a proposal.

SEPA response

One of the Water Framework Directive's tests for whether an exemption is applicable is that all practicable steps are taken to mitigate the adverse impact on the status of the body of water. This test refers expressly to impacts on the status of the water body. It contrasts with the test for significantly better environmental options. The latter makes no reference to the status of a water body. Because of this distinction, SEPA has taken a better environmental option to be one having lower environmental costs. The alternative of taking an option to be a significantly better environmental option if it has significantly less adverse impacts on the status of a water body could result in options qualifying as significantly better options even though their total environmental costs (including those not related to impacts on the water environment) would be of much greater significance than those of the proposed controlled activities.

13.3 Alternative options and technical infeasibility and disproportionate cost

Scottish Water and another respoondee believed that SEPA should consider detailed arguments about why other options are disproportionately expensive. Scottish Water suggested that SEPA should use an independent expert for this purpose.

SEPA response

SEPA agrees that the method should be improved to explain more clearly how to assess whether or not a significantly better environmental option is technically feasible and not disproportionately expensive. The method will be revised accordingly. SEPA will also seek to make applicants aware as early as possible within the regulatory process of whether or not consideration of alternative options is required.

SEPA takes the view that an alternative option is only a significantly better environmental option if:

1. the benefit it delivers is at least equivalent to the benefit that would be delivered by the proposal;
2. its environmental cost is significantly less than the environmental cost of the proposed controlled activity or activities; and
3. it is economically viable and hence a realistic option.

A significantly better environmental option would only be disproportionately expensive if its total cost (economic cost + environmental cost) would be out of proportion to the benefit it would deliver. SEPA believes that it is reasonable to assume that this would not be the case under either of the following circumstances:

- (i) developments that are reasonably comparable to the option have been undertaken in the recent past; are known to be being undertaken or known to be being planned; or
- (ii) there is no evidence that the economic cost of the alternative option is likely to be substantially higher than the economic cost of the proposal.

SEPA also considers it reasonable to assume that point 3 above would also apply if point (i) or (ii) applies.

In contrast, SEPA believes it reasonable to conclude that there is sufficient evidence that an alternative option is disproportionately expensive if:

- (a) points (i) and (ii) above do not apply;
- (b) there are good reasons to believe that the economic cost of the option would be significantly higher than the economic cost of the most similar developments (recently undertaken, being undertaken or being planned) to the option; and
- (c) there would be no proportionately greater benefit to off set the higher relative economic cost of the option.

Unless (a), (b) and (c) apply, SEPA believes that it cannot reasonably conclude that an option is disproportionately expensive. If (a), (b) and (c) apply, then additional information will not be required.

SEPA also believes that it would be reasonable to conclude that an option is technically

feasible if:

- (iii) point (i) above applies; and
- (iv) any particular environmental resources or characteristics on which the option relies in order to deliver at least an equivalent benefit to that of the proposal are present in the geographic area in which the option would need to be located.

There would be sufficient evidence to conclude that an option would be technically infeasible if:

- (d) there is reasonable evidence that point (iv) above does not apply; or
- (e) there is good reason to believe that the option could not be delivered using any established techniques.

13.4 Technical feasibility and disproportionate costs of upgrading existing hydropower stations

Scottish Renewables and British Hydropower Association stated that additional refurbishment of existing hydropower schemes would result in disproportionate costs for operators or be outwith the means of the applicant if the applicant did not own schemes with potential for refurbishment. Another respondent felt that all improvements to the electricity output of existing hydropower schemes have already been made.

SEPA response

The inclusion of the option of upgrading existing hydropower schemes in the method enables SEPA to demonstrate that this alternative option schemes has been considered in the decision-making process. Other Member States are also known to give consideration to this option.

If further upgrading of existing hydropower stations is concluded to be technically infeasible, the test for excluding the option would be passed. Similarly, the test for excluding the option would also be considered passed if upgrades - though technically feasible - were concluded to be disproportionately expensive.

14. PROTECTED AREAS

14.1 Consideration of Drinking Water Protected Areas

Scottish Water was concerned that the method did not make clear that risks posed to Drinking Water Protected Areas should be considered when determining whether or not to grant authorisation for a proposed controlled activity.

SEPA response

The regulatory method specifies that proposals that would compromise the achievement of the objectives for any type of Protected Areas cannot be authorised. SEPA will ensure that consideration is given to all types of Protected Areas, including Drinking Water Protected Areas, when determining proposals.

Annex 1

Proposals likely to have a significant negative effect on Special Areas of Conservation (SAC) or Special Protection Areas (SPA) will be considered using the established SEPA procedures. Where positive impacts on the protected habitats or species in an SAC or SPA are expected to result from a proposal, SEPA will treat the protected habitat or species as of very high importance when assessing the significance of the impact.

When assessing other potential impacts on biodiversity conservation, SEPA will consult:

- SNH over any proposal that is likely to damage the protected natural features of an SSSI;
- SNH about species of global conservation concern;
- SEPA Ecology or Marine Ecology about species or habitats identified in the UK Biodiversity Action Plan; and
- SEPA Ecology or Marine Ecology about species or habitats identified in a Local Biodiversity Action Plan.

Negligible	Very small	Small	Medium	Large	Very large
Very short-term (< 1 year) changes to a habitat, or plant or animal community, of interest on a protected site. Changes to the age structure, composition or abundance of the species, or to the habitat's quality or extent, which do not persist for more	Minor, short-term changes to a habitat, or plant or animal community, of interest on a designated site; or Minor, short-term (< 6 years), changes to the age structure, composition or abundance, or to habitat quality or extent, of a discrete population or sub-population of the species, or habitat.	Changes to a habitat, or plant or animal community, of interest on a designated site, where minor changes are still identifiable in the long-term (> 6 years), although site function and population integrity is restored in the short-term; or Short-term (< 6 years), major changes in the abundance of	Measureable long-term changes to a habitat, or plant or animal community, of interest on a designated site, where specific restoration/ intervention would be required to enable full recovery of site function or population integrity; or A discrete but minor population or sub-population is irreversibly lost or made non-viable [but	Irreversible loss of a measureable part of a habitat, or species population, of interest on a designated site such that site function or population integrity is measurably adversely impacted [but not to the extent that the viability of the species population or habitat at the site is compromised]; or A discrete and	The population of a species or a protected feature on a designated site would be reduced to a level which is, or is close to being, a non-viable level for its survival; or the geographic distribution of the species or habitat is reduced as a result of a discrete and functioning population, sub-population or habitat at the limit of the current geographic

than 1 year.		a discrete population or sub-population of the species, or habitat.	this does not reduce the overall geographic range of the species or habitat or significantly increase its risk of extinction]; or Long-term measurable but not major reduction in the abundance of a discrete and significant population or sub-population of the species, or habitat.	significant population or sub-population is irreversibly lost or made non-viable [but this does not reduce the overall geographic range of the species or habitat or significantly increase its risk of extinction]; or Major reduction in the abundance of a discrete and significant population or sub-population of the species, or habitat.	range becoming extinct or non-viable); or A significant increase in the risk of extinction of the species or the habitat within its geographic range (e.g. change in its risk status from 'vulnerable' to 'endangered' or from 'endangered' to 'critically endangered').
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Table A2: Indicative guide to assessing the relative importance of an impacted biodiversity interest			
Low	Medium	High	Very high
Species or habitats listed in the relevant Local Biodiversity Action Plan	Scottish priority species or habitats identified in the UK Biodiversity Action Plan* Species for which there is an ICES emergency plan**	Protected feature in a Site of Special Scientific Interest. A bird species listed in Schedule 1, other animal species listed in Schedule 5 or plant species listed in Schedule 8 of the Wildlife & Countryside Act***	A species or habitat of global conservation concern****

Note to Table A2

**Table A2 will be revised to take account of the Scottish Biodiversity List or other list endorsed by the Scottish Biodiversity Committee, once finalised. The current Scottish Biodiversity List can be viewed at: <http://www.biodiversityscotland.gov.uk/pageType2.php?id=35&type=2&navID=92>. The revised UKBAP priority habitat and species list is at: <http://www.ukbap.org.uk/NewPriorityList.aspx>

**e.g. European eel, <http://www.ices.dk/indexfla.asp>

*** See Schedule 1 bird species: <http://www.jncc.gov.uk/page-4341>; Schedule 5 animal species: <http://www.jncc.gov.uk/page-1815>; Schedule 8 plant species: <http://www.jncc.gov.uk/page-1816>.
**** See <http://www.iucnredlist.org/>. Species include freshwater pearl mussel.