

## **Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment**

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27 July 2007

Dear Consultee

### **Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment**

I am writing to invite your views on the proposed Soil Framework Directive and initial Regulatory Impact Assessment.

#### **Background**

The proposal for a Soil Framework Directive was published in September 2006 and is currently being considered by the Council of Ministers and the European Parliament. As the negotiations in Brussels are stepping up, developing further the Scottish and UK position is becoming more important. It is critical that the negotiating position is well-informed and based on sound evidence. This consultation, jointly issued by the Scottish Executive, Defra and the Welsh Assembly Government will assist in developing a robust negotiating position to enable the UK to engage effectively at EU level. Views are therefore invited on the scope of the Directive and its approach as well as on the benefits that the Directive may deliver, and the likely costs of implementing it.

The consultation period starts today, 27 July 2007 and will run for 12 weeks, with a final deadline for responses of 19 October 2007. However, in view of the Portuguese Presidency's intention to discuss this proposal at the October Environment Council (30 October 2007), stakeholders are invited to submit their responses ahead of the deadline if possible.

#### **Consultation paper and consultation list**

The following documents relating to this consultation can be found on the Scottish Executive website: <http://www.scotland.gov.uk/Consultations/Current>

- Consultation letter
- Consultation on the proposed EU Soil Framework Directive
- Initial Regulatory Impact Assessment
- Summary of the proposed EU Soil Framework Directive
- Proposal for an EU Soil Framework Directive
- List of consultees
- Respondent Information Form
- The Scottish Executive Consultation Process

## **List of consultees**

I have tried to cover all relevant interests. If you feel another party would benefit from seeing this consultation then please let me know or pass on the consultation details.

## **What consultees are invited to do**

You are welcome to comment on all aspects of the Commission's proposals and our initial Regulatory Impact Assessment but there are some specific issues on which I would particularly value your input.

In general terms, your views are sought on the following initial questions:

- What are your views on the current level of soil protection measures in Scotland considering the risks and threats faced by soils, including those identified by the Commission?
- If you consider these measures to be inadequate, do you believe that any gaps are best dealt with on a common basis across the EU, for example to avoid distortion in competition, or better dealt with at a domestic level?
- What, if any, gaps exist in terms of addressing soil protection at an EU level in particular the risks identified by the Commission?
- Does the solution to these gaps lie in amending existing EU Directives, or in introducing a new overarching framework for soil protection?
- Are there any existing EU provisions that give some protection to soils which, in your view, do not work or which could do with simplification?
- In terms of the risks and threats identified by the Commission, how urgent are these problems? Is there sufficient evidence to tackle them now?
- Who should bear the costs involved in any new obligations? Should we follow a polluter pays approach, a market-based system where, for example, a property developer pays the cost of remediation, or should these costs fall to taxpayers?

A series of more detailed questions on which I would appreciate your comments is set out in this consultation document. When you respond it would be helpful if you can indicate clearly the specific questions to which your answers relate. Where possible please provide explanation and examples to support comments made.

## **Responding to this consultation paper**

As outlined above written responses are invited by 19 October 2007, or earlier if at all possible.

**Please send your response to:**

[soils@scotland.gsi.gov.uk](mailto:soils@scotland.gsi.gov.uk)

or

Antje Branding  
Scottish Executive  
Environmental Quality Division  
Area 1G North  
Victoria Quay  
Edinburgh, EH6 6QQ

If you need me to print out and send you a copy of the consultation, or if you have any queries please contact me at the above address or on 0131 2440198.

I would be grateful if you could clearly indicate in your response which questions or parts of the consultation paper you are responding to as this will aid our analysis of the responses received.

This consultation, and all other Scottish Executive consultation exercises, can be viewed online on the consultation web pages of the Scottish Executive website at <http://www.scotland.gov.uk/consultations>. You can telephone Freephone 0800 77 1234 to find out where your nearest public internet access point is.

The Scottish Executive now has an email alert system for consultations ([SEconsult: http://www.scotland.gov.uk/consultations/seconsult.aspx](http://www.scotland.gov.uk/consultations/seconsult.aspx)). This system allows stakeholder individuals and organisations to register and receive a weekly email containing details of all new consultations (including web links). SEconsult complements, but in no way replaces SE distribution lists, and is designed to allow stakeholders to keep up to date with all SE consultation activity, and therefore be alerted at the earliest opportunity to those of most interest. We would encourage you to register.

### **Handling your response**

I need to know how you wish your response to be handled and, in particular, whether you are happy for your response to be made public. Please complete and return the attached **Respondent Information Form** as this will ensure that we treat your response appropriately. If you ask for your response not to be published I will regard it as confidential, and will treat it accordingly.

All respondents should be aware that the Scottish Executive are subject to the provisions of the Freedom of Information (Scotland) Act 2002 and would therefore have to consider any request made to it under the Act for information relating to responses made to this consultation exercise.

Where respondents have given permission for their response to be made public (see the attached Respondent Information Form), these will be made available to the public in the Scottish Executive Library by 26 October 2007 and on the [Scottish Executive consultation](#) web pages by mid November 2007. I will check all responses where agreement to publish has been given for any potentially defamatory material before logging them in the library or placing them on the website. You can make arrangements to view responses by contacting the SE Library on 0131 244 4552. Responses can be copied and sent to you, but a charge may be made for this service.

### **What happens next ?**

Following the closing date, all responses will be analysed and considered along with any other available evidence to help in developing a robust negotiating position and to enable the UK to engage effectively at EU level in the negotiation of the Soil Framework Directive. I aim to issue a report on this consultation process by mid November 2007.

### **Comments and complaints**

If you have any comments about how this consultation exercise has been conducted, please send them to the address above.

Thank you for your help.

Yours sincerely

**Antje Branding**  
Soil Policy Coordination Team

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## Links

European Commission Soils Policy webpage (including details of the proposed Soil Framework Directive and their Impact Assessment):

<http://ec.europa.eu/environment/soil/index.htm>

Defra Soils Policy webpage: <http://www.defra.gov.uk/environment/land/soil/index.htm>

## Foreword

Protection of our soil resource is an important part of the delivery of a sustainable future for the UK, the European Union and the wider international community. Our soils deliver a range of vital functions for human activities including food and fibre production, support for ecosystems and habitats, storage of carbon, stabilisation of contaminants, and filtration of water.

As part of the 6<sup>th</sup> Environment Action Plan agreed in 2002 by the European Council and the European Parliament, the European Commission was asked to produce a Thematic Strategy for the protection of soil as one of a series of measures aimed at addressing issues posed by climate change and other natural and man-made risks to the environment as a whole.

After much further preparatory work and a Europe-wide consultation with a range of expert and stakeholder interests, the Commission finally adopted such a Strategy in September 2006, accompanied by proposal for a new EU Soil Framework Directive.

In summary, the Strategy concludes that soil is being degraded by a host of human activities, such as urban development, inappropriate agricultural and forestry practices, industrial activities, and tourism. The proposed Soil Framework Directive accordingly seeks to ensure the protection and sustainable use of soil based on preventing further soil degradation and preserving its functions, and restoring degraded soils.

The main elements of the proposed Directive focus on requiring Member States to:

- assess the impacts of policies likely to exacerbate or reduce soil degradation processes during the development of these policies;
- take precautionary measures to protect soil functions;
- take appropriate measures to limit sealing - the permanent covering of the soil surface with an impermeable material;
- identify risk areas with regard to soil erosion, loss of soil organic matter, compaction, salinisation and landslides and draw up a programme of measures to address these risks;
- take appropriate action to prevent soil contamination; establish a national inventory of contaminated sites; and remediate all contaminated sites using mechanisms to fund remediation;
- raise awareness of the importance of soils.

Many of these issues are already the subject of existing UK (and in some cases EU) legislation and it is this context that we present this consultation paper. We are keen to learn from policy managers, operational bodies (including local authorities) land managers and users about how they see the proposals in the Directive meeting the needs of soil protection in the UK. It is also important to find out your views on the costs and benefits of the measures if the Directive were adopted and implemented. We would also like your suggestions as to how the measures could be improved, for example, to ensure they focus on real risks and that they require policy measures proportionate to those risks. This information will be valuable input to our negotiations on the proposed Directive.

We look forward to receiving your views.

A handwritten signature in black ink, appearing to read 'Jon Shaw'.

**Jonathan Shaw, Minister for Marine, Landscape & Rural Affairs and Minister for the South East**

A stylized handwritten signature in black ink, appearing to read 'Michael Russell'.

**Michael Russell MSP, Minister for Environment**

A handwritten signature in black ink, appearing to read 'Jane Davidson'.

**Jane Davidson, Minister for Environment, Sustainability & Housing**

## Executive summary

The Thematic Strategy for Soil Protection, adopted by the European Commission in September 2006, contains a proposal for a Soil Framework Directive.

This consultation, issued jointly by Defra, the Scottish Executive and the Welsh Assembly Government, is designed to assist us in developing a robust negotiating position to enable us to engage effectively in negotiations on the proposal. It is important that our negotiating line is well-informed and based on sound evidence. Hence we are seeking your views on the scope of the proposed Directive, as well as on the costs and benefits associated with it.

The consultation contains seven distinct parts:

Part 1, Introduction, outlines the background to the Commission's proposal, as well as the rationale for the proposed Directive, alongside the UK's initial Impact Assessment.

Part 2, Initial questions, sets out key general questions which will inform our analysis of the need for and benefits of the proposed Directive. It would be helpful if we could have answers to all of these initial questions.

Parts 3-7 each focus on a single Chapter of the draft Directive:

Part 3, Articles 1-5, general provisions

Part 4, Articles 6-8, risk prevention, mitigation and restoration

Part 5, Articles 9-14, soil contamination

Part 6, Articles 15-17, awareness raising, reporting and exchange of information

Part 7, Articles 18-26, final provisions

In each of these Parts of the consultation document the key Articles within the relevant Chapter of the draft Directive are outlined and the issues we have identified in relation to these, to date, are summarised. Where relevant our preliminary analysis of costs and benefits associated with each proposed Article is given. Any current EC or domestic legislation which is already in place to address related issues is described to assist consultees consider how this additional legislation fits in with existing legislation. This is followed by a series of questions relating to the Article under consideration. Not all questions will be of interest to all recipients. We are not expecting everyone to attempt to answer them all.

Responses to the consultation will assist in the formulation of our negotiating position. We will rely on this position to shape the proposed Directive through discussions at European level and through negotiations and lobbying of other Member States, the Parliament and the Commission. However, as we are already involved in such negotiations, we are taking into account responses to Stakeholder Workshops held in London, Edinburgh and Cardiff and consideration by officials as to how the proposed Directive fits in with UK policy on better regulation and other general principles. **It would be helpful for us to receive as many responses as possible before the closing date for this consultation, 19 October 2007. This will assist us to process replies and help develop our negotiating position as things develop in the autumn.**



## **Part 1 – Introduction**

### **The proposed Directive and timeline**

1.1 The European Commission adopted the Thematic Strategy for Soil Protection, including proposals for a Framework Directive for Soils, in September 2006<sup>1</sup>. The proposed Directive lays down a framework for the protection and sustainable use of soil based on the principles of integration of soil issues into other policies, preservation of soil functions within the context of sustainable use, prevention of threats to soil and mitigation of their effects, as well as restoration of degraded soils to a level of functionality consistent at least with the current and approved future use of the land.

1.2 The key elements of the Directive as proposed by the Commission are:

- i. A requirement for central and local Government to consider the impacts that new policies will have on soils whilst they are being developed (Article 3);
- ii. A duty on all land-users to prevent or minimise harm to soils (Article 4);
- iii. A requirement to limit or mitigate the effects of soil sealing (the covering of the soil surface with an impermeable material such as concrete) (Article 5);
- iv. A requirement to reduce the risks relating to soil erosion, organic matter decline, compaction, salinisation, and landslides, by identifying risk areas, and deciding on a programme of measures to address these risks (Articles 6-8);
- v. A requirement to prevent soil contamination, compile an inventory of contaminated sites and remediate those sites listed on the inventory (Articles 9-14); and
- vi. A requirement to raise awareness of soils issues, report to the Commission, and exchange information (Articles 15-17).

1.3 The proposed Directive is now being considered by the Council of Ministers and the European Parliament under the co-decision procedure. A first read-through of the proposal has been undertaken at Council Working Groups and the Portuguese Presidency is aiming to produce a Presidency compromise text over the summer. The European Parliament's Environment Committee has held an initial exchange of views on the dossier and is preparing a report for plenary discussion in the autumn.

### **Sectors affected**

1.4 As drafted the Directive will impact upon a wide range of people and organisations in the UK, including farmers, property developers, the construction industry, individual land owners, and any industry which affects the state of soils. Local Authorities and other enforcement bodies may also have to accept new regulatory

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<sup>1</sup> <http://ec.europa.eu/environment/soil/index.htm>

responsibilities and approaches in order to implement the proposed Directive, with the risk that this will lead to significant new burdens on them.

## **Purpose of consultation**

1.5 This consultation, issued jointly by Defra, the Scottish Executive and the Welsh Assembly Government, is designed to assist us in developing a robust negotiating position to enable us to engage effectively in negotiations. It is important that our negotiating line is well-informed and based on sound evidence. Hence, we are seeking your views on the scope of the proposed Directive and its approach, as well as on the benefits that the proposed Directive may deliver and the likely costs of implementing it.

1.6 Any references in this paper to “Great Britain” should be taken as referring to England, Scotland and Wales. References to “the Government” should be taken to read the UK Government, the Scottish Executive and the Welsh Assembly Government.

1.7 Although this consultation is not being carried out in Northern Ireland anyone wishing to make any particular comments in relation to Northern Ireland issues should do so to Norman Simmons: [norman.simmons@doeni.gov.uk](mailto:norman.simmons@doeni.gov.uk).

1.8 The UK has prepared an initial Regulatory Impact Assessment which sets out our preliminary assessment of the costs and benefits related to the Commission’s proposal. We would welcome your views on this to assist our development of a more detailed Impact Assessment.

1.9 The Government also invite you to comment on the implications of the various provisions contained within the proposed Directive, as well as on possible amendments to the proposed Directive which we may need to seek to ensure our interests are looked after.

1.10 Your comments will assist us in developing our position and continue our work to look at costs and benefits of the proposed Directive through Impact Assessment. Ultimately, any agreed Directive will of course reflect positions taken by the 27 Member States, the European Parliament and the Commission. We will of course seek actively to influence negotiations and discussion of the proposed Directive at European level, including lobbying other Member States, the Parliament and the Commission.

1.11 Stakeholder engagement to date has included three separate workshops (held in London on 17 May, Edinburgh on 8 June and Cardiff on 2 July) to obtain preliminary stakeholder views on the proposed Directive; feedback from these events have fed into our developing negotiating line and this consultation<sup>2</sup>. We will continue to keep stakeholders engaged as we proceed with negotiations.

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<sup>2</sup> A report from the London workshop is available:  
<http://www.defra.gov.uk/environment/land/soil/europe/index.htm>

## Background to the proposed Directive

1.12 Member States, agree that action to protect soils is necessary, and have made Community level commitments to this effect. The 6th Environmental Action Programme established a Community objective to protect soils against erosion and pollution. The Sustainable Development Strategy, published in 2001, noted that soil loss and declining fertility are eroding the viability of agricultural land. We recognise the importance of protecting our soil resources as soil is a fundamental and ultimately finite natural resource which has many functions.

1.13 In 2002, the Commission's Communication 'Towards a Thematic Strategy for Soil Protection' [COM (2002) 179]<sup>3</sup> was accepted by Member States. Following publication of this Communication, several expert Working Groups were established to discuss how best to address soil issues. The outcomes from these discussions were fed into the Commission's 'Thematic Strategy for Soil Protection' [COM (2006) 231]<sup>4</sup>, which was adopted by the Commission on 22 September 2006. This included proposals for a Directive "establishing a framework for the protection of soil and amending Directive 2004/35/EC" [COM (2006) 232]<sup>5</sup>.

1.14 If the proposed Soil Framework Directive is adopted, it will be the first soil specific legislation to apply across the whole of Europe. However, there is already a wide range of European legal instruments which, though not specifically designed to address soil issues, provides some protection against the risks of soil degradation and contamination. Relevant Directives/Regulations include:

- the Water Framework Directive which, amongst other things, addresses erosion and agriculture related risks to water; as well as existing soil contamination which detracts from or prejudices "good status" of a water body. These risks will need to be tackled by Member States in order to meet the Directive obligations;
- the Waste Framework Directive, the Air Quality Directives and others which address the prevention of pollution;
- the Strategic Environmental Assessment Directive which requires the integration of environmental considerations into policy making;
- the Environmental Impact Assessment Directive which requires an assessment of the environmental impacts (including on soils) of certain projects to be conducted, and the introduction of a consents regime to give the go ahead to projects as appropriate;
- the Integrated Pollution Prevention Control Directive which provides a licensing system for current activities which have the potential to cause pollution, and include clean-up mechanisms for new contamination;

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<sup>3</sup> COM(2002)179 - [http://eur-lex.europa.eu/LexUriServ/site/en/com/2002/com2002\\_0179en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2002/com2002_0179en01.pdf)

<sup>4</sup> COM(2006)231 final - [http://ec.europa.eu/environment/soil/pdf/com\\_2006\\_0231\\_en.pdf](http://ec.europa.eu/environment/soil/pdf/com_2006_0231_en.pdf)

<sup>5</sup> COM (2006)232 final - [http://ec.europa.eu/environment/soil/pdf/com\\_2006\\_0232\\_en.pdf](http://ec.europa.eu/environment/soil/pdf/com_2006_0232_en.pdf)

- the Environmental Liability Directive which includes measures to secure remediation of new environmental damage, and provides a further incentive for the prevention of contamination by operators of potentially polluting activities;
- the Habitats Directive which requires Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status; and
- CAP Single Payment Regulations and the Rural Development Regulation – the former require farmers to comply with a baseline set of environmental/agricultural standards in order to receive payments and the latter provides for payments for improvement to agricultural land.

These are explained in more detail in the relevant parts of this document.

1.15 The range of existing legislation raises the issue as to whether this proposed Directive is necessary and if it is what it should cover and the provisions required to achieve the relevant outcomes.

### **The Commission's Rationale for the proposed Directive**

1.16 The Commission's Communication and Impact Assessment<sup>6</sup> set out its justification of its proposals. This justification is summarised below. Note that we are not satisfied as to the adequacy of this impact assessment.

1.17 In terms of the state of soils, the Commission's key conclusions are that:

- 115 million hectares, 12% of Europe's total land area, are subject to soil erosion and 42 million hectares are affected by wind erosion.
- 45% of European soils have low organic matter content, principally in Southern Europe but also in areas of France, the UK and Germany.
- 3.5million hectares are potentially contaminated in the EU-25.

1.18 In terms of the overall costs of soil degradation, the Commission estimates this to be up to €38 billion (£26 billion) per annum for the EU-25. This is costed as follows:

- Erosion - €0.7-14 billion (£0.5-9.4 billion) p.a. However this does not take into account the impact of recently introduced EU-wide measures.
- Declining organic matter - €3.4-5.6 billion (£2.3-3.8 billion) p.a.
- Compaction – no monetary figure available; yield reductions of between 13%-35% per hectare.

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<sup>6</sup> SEC (2006)620 - [http://ec.europa.eu/environment/soil/pdf/sec\\_2006\\_620\\_en.pdf](http://ec.europa.eu/environment/soil/pdf/sec_2006_620_en.pdf)

- Salinisation – this is stated to affect 3.8 million hectares in EU-25 but the issue appears to relate to only a few Member States. The Commission estimates the costs to be €158-321 million (£106-216 million) p.a.
- Landslides – up to €1.2 billion (£0.7 billion) per event.
- Contamination costs – €2.4-17.3 billion (£1.6-11.6 billion) p.a. EU-wide.
- Sealing – no costs are given. Reference is made to the increase in soil surface covered up by impermeable surfaces including a 6% increase in sealed areas between 1990 and 2000 in the EU-15. It refers to risks relating to increased flood risks; disruption of gas, water, electricity fluxes; reduced groundwater recharge; increased water pollution; loss in soil and terrestrial biodiversity.

1.19 The Impact Assessment makes no quantitative assessment of the benefits of the proposed actions in the draft Soil Framework Directive or of many of the costs which those actions themselves would entail. Some costs are included such as:

- Preparing an inventory of contaminated land, which is estimated to be €51 million (£34 million) p.a. for 5 years across the EU (calculated by assuming costs on average of €3100 (£2085) per site) for an initial survey and €241 million (£162 million) p.a. for 25 years for full site surveys. However, the UK anticipates that the actual costs to the EU of populating such an inventory according to the methodology prescribed by the Commission will be significantly higher than this;
- Mapping of risk areas - €2million (£1.4 million) p.a. for 50 years across the EU-25.

1.20 The Commission's Impact Assessment does not include a detailed comparative cost/benefit analysis of the policy options (e.g. the Water Framework Directive, CAP cross-compliance, etc) for achieving reductions in the various forms of soil degradation. In addition, it does not take into account the benefits from recently introduced EU-wide measures or domestic regimes for addressing these issues. The UK has raised its concerns about the inadequacy of this Impact Assessment and the underestimates of particular costs at several EU-level meetings.

1.21 The Commission concludes that the proposed Soil Framework Directive represents the best approach considering a perceived need to balance flexibility of implementation at Member State level with a common and systematic process of identifying issues and risks. It is explicitly stated that costs will be incurred before benefits can be realised, and these are likely to be distributed unevenly between Member States.

1.22 However, there are significant concerns regarding the Commission's justification for specific Community legislation on soils, especially given the broad portfolio of existing EC legislation such as the Integrated Pollution Prevention Control, Water Framework, Strategic Environmental Assessment, and Environmental Liability Directives, plus the Common Agricultural Policy, and at the national level, planning

legislation and policy frameworks, which already largely address the threats to soils outlined in the proposals.

## **UK initial Regulatory Impact Assessment**

1.23 Soil is a fundamental and ultimately finite natural resource which has many functions. It is therefore vital that our soil resources are protected. By carrying out an initial Regulatory Impact Assessment (RIA) we have sought to assess whether the Directive in its current form will assist in achieving this objective and what the costs and benefits of the proposed Directive will be.

1.24 The UK's initial Regulatory Impact Assessment<sup>7</sup> sets out the approximate costs and benefits of implementing the Directive as it is currently drafted, and also the costs and benefits associated with other options, including a 'do nothing' option, possible amendments to the current proposals, and the alternative of a non-binding approach based on voluntary uptake by Member States of the recommendations of the Thematic Strategy.

1.25 The UK believes itself to be progressing well in addressing soil issues. We already have an extensive range of measures in place, many of which implement existing EC legislation, which address the threats to the UK's soils, including the threats outlined in the proposed Soil Framework Directive.

1.26 Our preliminary conclusion, having carried out this initial RIA, is that additional EC legislation is most probably not required to enable the UK to take appropriate measures to address risks to its soils. In addition, from a UK point of view, the current proposals risk being overly prescriptive, disproportionate and expensive to implement. Significant changes in the proposed Directive would be needed to deliver positive net benefits at the national level.

1.27 We have particularly strong concerns about the provisions on soil contamination which are prescriptive, especially as to drawing up an inventory, and have serious costs consequences. The UK is also concerned about the impact of the provisions on soil sealing which could affect development at all levels, and, especially through overloading the system, compromise the ability of the planning system to help deliver sustainable development that the country requires.

1.28 A Directive may, however, be of assistance to some other Member States in protecting their soils, especially those facing issues of desertification and salinisation. The Commission's justification for such legislation is based on ensuring a level playing field and addressing transboundary effects. However, the UK's initial view is that the impact on our competitiveness from current levels of protection to be limited and transboundary effects to also be limited. There are however some transboundary issues such as carbon storage in our soils, as well as filtration of our water through soils. We would appreciate your views on the possible benefits of a Directive in terms of dealing with transboundary issues as well as in relation to ensuring a more level playing field (see initial questions at Part 2).

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<sup>7</sup> <http://www.defra.gov.uk/corporate/consult/soil-directive/index.htm>

1.29 We will provide a further quantitative analysis of the costs and benefits of the proposed Directive in the next iteration of the Regulatory Impact Assessment, drawing on evidence provided in this consultation.

### **Outline of the consultation document**

1.30 Part 2 of the consultation document sets out some **initial questions** about the need for a Directive and the principles underlying the present proposals.

1.31 Parts 3-7 contain a series of more **detailed questions** relating to the individual Chapter of the proposals as tabled. All questions are also outlined in Annex A.

1.32 **Not all questions will be of interest to all recipients.** We are **not** expecting everyone to attempt to answer them all. Similarly if there are issues of concern which are not covered either in the general questions or the more specific sections, please feel free to provide additional comments in your response – though it would help if you separate these from answers to the questions as asked.

1.33 To assist in your consideration we have included the text of Key Articles in full in each Chapter with an explanation of the issues which we believe arise.

1.34 Where relevant, our preliminary analysis of the costs and benefits associated with each proposed Article is summarised, and any current European or domestic legislation which is already in place to address related issues is described.

## **Part 2 – Initial Questions**

2.1 In addition to the specific questions included throughout the consultation document, we would like your views on the overarching questions set out below.

2.2 You will probably find it helpful to read the explanation of the content of the proposed Directive and our explanation of existing EC and domestic legislation which is in the following sections before you do so. Where possible please provide explanation and examples to support comments made.

### **2.3 Questions:**

- **A. What are your views on the current level of soil protection measures in the UK considering the risks and threats faced by soils, including those identified by the Commission?**
- **B. If you consider these measures to be inadequate, do you believe that any gaps are best dealt with on a common basis across the EU, for example to avoid distortion in competition, or better dealt with at a domestic level?**
- **C. What, if any, gaps exist in terms of addressing soil protection at an EU level in particular the risks identified by the Commission?**
- **D. Does the solution to these gaps lie in amending existing EU Directives, or in introducing a new overarching framework for soil protection?**
- **E. Are there any existing EU provisions that give some protection to soils which, in your view, do not work or which could do with simplification?**
- **F. In terms of the risks and threats identified by the Commission, how urgent are these problems? Is there sufficient evidence to tackle them now?**
- **G. Who should bear the costs involved in any new obligations? Should we follow a polluter pays approach, a market-based system where, for example, a property developer pays the cost of remediation, or should these costs fall to taxpayers?**

2.4 This consultation closes on **19 October 2007** but we would welcome early comments if possible in view of the Portuguese Presidency's intention to discuss this proposal at the October Environment Council (30 October 2007).



## Part 3 – Chapter I: Articles 1-5 – General Provisions

### Article 1 – Subject-matter and scope

#### Article 1 – Subject-matter and scope

1. This Directive establishes a framework for the protection of soil and the preservation of the capacity of soil to perform any of the following environmental, economic, social and cultural functions:

- a) biomass production, including in agriculture and forestry;
- b) storing, filtering and transforming nutrients, substances and water;
- c) biodiversity pool, such as habitats, species and genes;
- d) physical and cultural environment for humans and human activities;
- e) source of raw materials;
- f) acting as carbon pool;
- g) archive of geological and archaeological heritage.

To that end, it lays down measures for the prevention of soil degradation processes, both occurring naturally and caused by a wide range of human activities, which undermine the capacity of a soil to perform those functions. Such measures include the mitigation of the effects of those processes, and the restoration and remediation of degraded soils to a level of functionality consistent at least with the current and approved future use.

2. This Directive shall apply to soil forming the top layer of the earth's crust situated between the bedrock and the surface, excluding groundwater as defined in Article 2(2) of Directive 2000/60/EC of the European Parliament and of the Council.

#### Content

3.1 This is an important Article as it determines the scope of the proposed Directive and how other provisions are interpreted, even though it does not impose any express obligations itself.

#### Issues raised

3.2 This proposed Article places emphasis on protecting soil, preserving its capacity to perform soil functions, and preventing certain degradation processes. This raises an issue as to whether the needs of the current generation to make use of soil in the present are given adequate recognition.

3.3 No distinction is made between soil degradation processes that are caused naturally and those caused by human activities. The implication that “natural processes” need to be addressed raises issues as to the extent to which this must and can be done. Our initial view is that Member States will, under the proposed Directive, have some discretion as to the extent to which such processes need to be controlled when drawing up their programmes of measures, but we remain concerned about the way in which the wording could be interpreted possibly requiring us to address such processes when we consider this detrimental or unnecessary.

3.4 The definition of soil leaves it unclear whether riverbanks, riverbed sediment, lake sediment and coastal areas are covered.

### Questions

- **Q.1 What are your views on the scope of the proposed Directive, in particular the definition of soil and the soil functions which are listed?**
- **Q.2 Do you think the proposed Directive seeks the right level of protection for our soils?**
- **Q.3 Do you think it is important for Member States to address natural degradation as well as that caused by human activity?**

### Article 2 - Definitions

#### Article 2 – Definitions

For the purposes of this Directive, the following definitions shall apply:

- 1) 'sealing' means the permanent covering of the soil surface with an impermeable material;
- 2) 'dangerous substances' means substances or preparations within the meaning of Council Directive 67/548/EC and Directive 1999/45/EC of the European Parliament and of the Council.

### Content

3.5 This proposed Article lays down definitions of:

- sealing, relevant to the proposed Article 5; and
- dangerous substances (referring to a previous definition under Directives 67/548/EC and 1999/45/EC on the approximation of laws, regulations and administrative provisions relating to the classification, packaging and labeling of dangerous substances), relevant to the proposed Articles 9-14 on soil contamination.

### Issues raised

3.6 The definition of sealing relates to the permanent covering of the soil surface, it is unclear what "permanent" means and there could be a time limiting issue to this. Additionally, this definition does not appear to cover sub-surface sealing.

## Questions

- **Q.4 Do you have any comments on these definitions? Do you think it is important to clarify any other terms in the proposed Directive?**

## Article 3 – Integration

### Article 3 – Integration

In the development of sectoral policies likely to exacerbate or reduce soil degradation processes, Member States shall identify, describe and assess the impacts of such policies on these processes, in particular in the areas of regional and urban spatial planning, transport, energy, agriculture, rural development, forestry, raw material extraction, trade and industry, product policy, tourism, climate change, environment, nature and landscape.

Member States shall make public those findings.

### Existing EC/domestic legislation

3.7 The Strategic Environmental Assessment (SEA) Directive<sup>8</sup>, requires an assessment of the environmental impacts (including on soil) to be conducted, when drawing up certain plans and programmes which are likely to have significant effects on the environment<sup>9</sup>. Requirements under the proposed Article 3 broadly replicate this but also mention some sectors not specifically mentioned in the SEA Directive, including raw material extraction and climate change. As this proposal sets out a non-exhaustive list of sectors, the effects of all policies which may have an impact on soil will need to be considered and a decision made as to whether an assessment is needed.

3.8 The SEA Directive has been implemented in the UK in various ways including through the sustainability appraisal of planning strategies and local plans. Sustainability appraisal ensures that choices made during the plan making processes at regional and local level are based on clear evidence of their economic impacts, as well as those on society and the environment, which includes consideration of the implications for soils.

### Issues raised

3.9 There is an overlap with the SEA Directive, which will mean two overlapping regimes that may have to be implemented slightly differently. This could give rise to complicated, potentially inconsistent regulatory approaches to assessing impacts of policies – where some policies will only be scrutinised for their effect on soils (unlike the

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<sup>8</sup> Directive 2001/42/EC

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:32001L0042:EN:HTML>

<sup>9</sup> An environmental assessment shall be carried out for all plans and programmes, which are likely to have significant environmental effects and which a) are prepared for agriculture, forestry, fisheries, energy, industry, transport, waste management, water management, telecommunications, tourism, town and country planning or land use and which set the framework for future development consent of projects listed in Annexes I and II of the Environmental Impact Assessment, or b) in view of the likely effect on sites, have been determined to require an assessment pursuant to Article 6 or 7 of the Habitats Directive.

holistic environmental assessment under the SEA Directive), and different consultation requirements may apply in different cases. For example, in respect of soils, it would be necessary to carry out an assessment in relation to a broader range of sectoral policies but there will be no duty to consult in relation to these policies. We are uncertain as to why it is considered necessary to add this duty in relation to the impact on soil but not other environmental media such as air and water.

3.10 Such broad sectoral coverage as proposed in the Soil Framework Directive may also mean that consideration of the impact on soils is carried out as a matter of course without sufficiently in-depth analysis. This may dilute the effect of the SEA Directive.

## Questions

- **Q.5 Do you consider there is a significant benefit in expanding the duty, as provided by the proposed Directive, to carry out an environmental assessment in so far as soil is concerned, so that it covers all other sectoral policies which may have a significant impact on soil? If so, which particular sectors of policy do you think impact on soil and need to be covered? And what are your views on leaving out the duty to consult in relation to these additional sectors?**
- **Q.6 What are your views on how this provision could be improved, for example, should it instead only refer to the SEA Directive in the recitals and include this additional duty in respect of soils only in respect of policies not already covered by the SEA Directive?**

## Article 4 – Precautionary measures

### Article 4 – Precautionary measures

Member States shall ensure that any land user whose actions affect the soil in a way that can reasonably be expected to hamper significantly the soil functions referred to in Article 1(1) is obliged to take precautions to prevent or minimise such adverse effects.

## Content

3.11 This proposed Article sets out a very broad duty on Member States to ensure all “land-users” take precautions to prevent or minimise the adverse effects of any actions which can reasonably be expected to hamper significantly the soil functions in the proposed Article 1.

3.12 This proposal requires Member States to take measures, possibly in addition to those under the proposed Articles 8 and 9, in respect of agricultural and rural soils, as well as in relation to other sectors.

3.13 There is a lack of clarity in respect of several issues including:

(a) whether all soil pollution is covered by the proposed Article 9 rather than the proposed Article 4. If soil pollution is covered by Article 4 as well as Article 9, then pollution by way of air deposition might be covered by the proposed Directive.

(b) which activities, and what scale of activity, should be regarded as significantly hampering soil functions.

## **Existing EC/domestic legislation**

3.14 The Environmental Impact Assessment (EIA) Directive<sup>10</sup>, as implemented in the UK, requires, in relation to projects above a certain scale, an assessment of the environmental impacts of the proposed project (which should include consideration of the impacts upon soil) before the consent is given. So this provision overlaps with the EIA, in relation to projects above a certain size, but also brings in similar requirements in relation to activities which do not amount to projects and possibly also to projects below established EIA thresholds if they “significantly hamper soil functions”.

3.15 There is a wide range of legislation at an EC and domestic which covers such activities from regulation of waste to land, use of pesticides and veterinary medicines. Domestic legislation has also been introduced to implement CAP cross-compliance<sup>11</sup>. This lays down a broad set of measures for farmers and land managers who claim the Single Payment or Single Farm Payment in Scotland.

## **Issues raised**

3.16 As drafted this provision requires an assessment, such as under the EIA Directive, for activities and other projects without setting clear *de minimis* levels. It is likely therefore to require extensive work to decide which activities must be regulated and also in terms of enforcement.

3.17 There is a lack of certainty as to when an activity should be regarded as “hampering significantly the soil functions” and exactly which land-users the proposed Directive intends Member States to regulate.

3.18 There is also a lack of certainty as to whether the proposed Directive might be interpreted as requiring action to be taken to prevent rather than simply minimise adverse effects, as well as the extent to which such effects must be mitigated. This may mean that certain activities will have to be restricted even where their impact is low but could be considered ‘significant’.

3.19 In respect of the agricultural community, revision and tightening up of CAP cross compliance type measures to cover those outside the CAP might also be needed.

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<sup>10</sup> Directive 97/11/EC

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:31997L0011:EN:HTML>

<sup>11</sup> Council Regulation (EC) No 1782/2003

[http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l\\_270/l\\_27020031021en00010069.pdf](http://europa.eu.int/eur-lex/pri/en/oj/dat/2003/l_270/l_27020031021en00010069.pdf)

3.20 There are some additional questions such as whether this proposed Article covers soil pollution. If so, this may require restrictions in relation to deposition from air pollution.

3.21 The relationship with issues already addressed by other legislation is also unclear.

3.22 This provision could however provide a means of ensuring comprehensive protection of our soils. It may be that clarity and specific exceptions are what is needed.

### **Initial Regulatory Impact Assessment – costs and benefits**

3.23 We have not yet identified the costs and benefits of this provision but it is considered that the administrative burden on Government in terms of having to legislate to cover many sectors, as well as to inspect and enforce could amount to several million pounds per annum. The costs depend on exactly what additional measures will be required under this provision. This is still under consideration.

### **Questions**

- **Q.7 There are a number of ways in which this proposed Article could be adapted. Please let us have your views on how this provision could be amended. Some possibilities you may wish to consider are:**
  - inclusion of an appropriate *de minimis* threshold, in terms of area of land affected.
  - leaving it to individual Member States to decide which land-users are covered and which activities should be regarded as likely to result in significant harm. This may mean differing levels of care in different Member States but with more flexibility to deal with relevant local issues that may change with time.
  - leaving this outcome to be achieved by the EIA and other Directives, and simply requiring Member States to encourage action by land-users more generally to minimise their impact on soil functions.
  - exceptions or limits to the duty to prevent or minimise, for example, because some uses serve important social or economic needs, and minimising adverse effects may be technically infeasible or involve excessive cost?
- **Q.8 What activities, which are not already regulated in the UK, if any, do you consider may have a significant adverse impact on soils?**
- **Q.9 Do you have any comments on the issues we have raised, and on our initial analysis of costs and benefits?**

## **Article 5 – Sealing**

### **Article 5 – Sealing**

For the purposes of preserving the soil functions referred to in Article 1(1), Member States shall take appropriate measures to limit sealing or, where sealing is to be carried out, to mitigate its effects in particular by the use of construction techniques and products which will allow as many of those functions as possible to be maintained.

### **Content**

3.24 This proposed Article requires Member States to take measures to limit sealing (defined in the proposed Article 2 as permanent covering of the soil surface with an impermeable material) or where sealing is carried out to mitigate its effects using construction techniques and products to preserve the soil functions as referred to in the proposed Article 1. The provision relates to the construction of buildings, roads, pavements and any other impermeable materials that cover the surface of soils. Hence, it is directly applicable to domestic planning systems and has repercussions for new development as well as soil protection.

3.25 The purpose of this proposal is to preserve the soil functions listed in the proposed Article 1, including in practice ensuring aquifer recharge, enabling water run-off to be filtered, reducing contamination risks to ground and surface water, reducing flood risk, and protecting good quality agricultural land and biodiversity. The proposed Recital 13 explains the reasons for the provision on sealing. In doing so, the Recital points to the impact of “urban sprawl” on soil functions and the need to promote brownfield development so as to reduce the use of greenfield sites.

3.26 Member States would be required to regulate sealing. This would involve limiting it, possibly by preventing some proposed developments or reducing their coverage. The proposed Articles 1 and 4 are important to the interpretation of this proposed Article. These suggest Member States should prevent or minimise adverse effects on soils. Where sealing does occur Member States should ensure the effects of sealing are mitigated; for example, through the use of permeable pavements and Sustainable Urban Drainage Systems.

### **Existing EC/domestic legislation**

3.27 The Strategic Environmental Assessment Directive requires a formal environmental assessment of certain programmes and plans which are likely to have significant effects on the environment. This includes assessing the effect on soil, water and the interrelationships between these factors. In England, sustainability appraisal of regional spatial strategies (RSSs) and local development documents (LDDs) is required by the Planning and Compulsory Purchase Act 2004 and incorporates the requirements of the SEA Directive. This is where the content of RSSs and LDDs is tested and the implications for soils considered. Sustainability appraisal focuses on the full range of social, environmental and economic effects and integrates environmental concerns with the other pillars of sustainable development. Local planning authorities must determine planning applications in accordance with the statutory development plan which comprises development plan documents (a type of LDD) and the relevant RSS, unless

material considerations indicate otherwise. Relevant and recent national policy, particularly where this points to a different decision than suggested by the development plan, can be a material consideration.

3.28 Projects which are likely to have significant effects on the environment are subject to Environmental Impact Assessment (EIA). This involves an assessment of how the proposed project will affect certain aspects of the environment including soils. Development consent for a project subject to EIA cannot be granted without the decision-maker first taking into account the environmental information before them.

3.29 In terms of the specific soil functions which this provision seeks to protect, the Water Framework Directive requires Member States to protect the quality of ground and surface water, and the quantity of groundwater. In the UK, one of the means of implementing this might be to introduce measures to promote sustainable drainage systems to manage run-off from roads and buildings. This is a valuable role in preventing the flow of pollutants, which may include soil material, to surface waters.

3.30 The proposed Floods Directive requires Member States to develop flood risk management plans for areas considered to be at significant risk of flooding. This includes establishing measures and objectives for managing flood risk, focusing on reducing the potential adverse consequences of flooding and/or reducing the likelihood of flooding. Amongst other issues, flood risk management plans will need to take into account the environmental objectives of Article 4 of the Water Framework Directive (environmental objectives) and soil and water management. Negotiations on the Floods Directive have concluded and formal adoption is expected in the autumn, from which time Member States will have two years in which to transpose its provisions.

3.31 To implement the Habitats Directive and to meet domestic biodiversity targets, planning authorities already have specific responsibilities on biodiversity, and should therefore already consider implications of sealing for this soil function.

## **Issues raised**

3.32 To a large extent this provision replicates existing environmental legislation including that on water and biodiversity but it goes further by specifically requiring sealing to be limited or mitigated. The provision does not make clear how far Member States must go to limit sealing or the scale of development to be affected. This lack of clarity and the potential impacts on desirable and sustainable new development causes us concern.

3.33 As drafted, this Article does not recognise that soil sealing can arise from socially and economically beneficial development. Equally, it does not recognise the contribution sealing makes to achieving environmental outcomes through developments such as waste water treatment works or wind farms or flood prevention schemes. This proposal could have a significant impact on new development on any site, brownfield or greenfield, where there is soil, even where the development is not automatically ruled out. This would arise through adding to its costs (and viability) by requiring specific designs and materials, and by requiring additional studies which may delay consent procedures.



3.34 There is no *de minimis* in terms of physical area in the provision so it could affect very small developments such as the paving over of front gardens which currently fall within the scope of permitted development rights which permit certain small scale developments without the requirement to submit a planning application.

3.35 In terms of the preference for brownfield development, the UK already has a policy of encouraging development on brownfield site. For example, national planning policy in England is for local planning authorities to make effective use of land by re-using previously developed land, with a national target that at least 60% of new housing should be built on such land.

3.36 Overall, we are concerned that this proposed Article would have a significant effect on all development and have major implications for control mechanisms currently in place. Taking England as an example:

- provisions may have to be applied to small developments, such as extensions to domestic property and paving in front gardens, currently within the scope of permitted development rights (PDRs). These permit small scale projects without the requirement to submit a planning application. Reducing the scope of permitted development would significantly increase the number of planning applications dealt with by Local Planning Authorities (LPAs), the time taken to do so, and the burden on those required to submit these.
- the provision would lead to the loss of some development land, with consequential effects on house building, hospitals, etc, unless they are to be built on brownfield site, because soil sealing provisions are likely to mean that certain land can no longer be developed, and to increased construction costs if more expensive materials and construction techniques are needed to mitigate the effects of soil sealing.

### **Initial Regulatory Impact Assessment - costs and benefits**

3.37 We have not been able to quantify these as yet but key points to note are as follows:

- Less flexibility for Member States on use and development of land in accordance with the principle of sustainable development. This could mean that otherwise suitable development land could no longer be used. This would have adverse consequences for the sustainability of communities, including on the affordability of housing.
- As drafted, the Directive would increase the number of proposals which require the submission of planning applications. In aggregate, this would be costly in terms of the time and resources required to make them, and the extra demands on the administration of the planning system.
- Reducing sealing of soils can have some environmental benefits, through the protection of particular soil functions. For example, if members of the public wishing to pave drives and gardens required planning applications, the occurrence of such activities might be reduced, thus decreasing run-off rates

and reducing flooding, although as discussed above such a measure would significantly increase the burden on LPAs.

- It could also strengthen protection for biodiversity, soils for food and fibre production and green space. However, the issue can be complex as developments requiring sealing can, as already mentioned, bring both environmental and social benefits, for example, through the construction of a sewage treatment works or a hospital.
- Construction costs may increase as the materials and construction techniques required to mitigate the effects of soil sealing may be more costly than standard techniques.

## Questions

- **Q.10 Do you consider there to be significant benefits in having new EC legislation that deals with soil sealing? If so, what are the benefits and do they in your view exceed the potential costs?**
- **Q.11 Do you think there would be value in amending the draft Directive, for example, to:**
  - a) **make it clear that Member States in considering the need to limit soil sealing should do this as part of their overall consideration of a proposed development's environmental, social and economic impacts;**
  - b) **provide for exceptions to the requirement to limit sealing, for example, where the proposed development/sealing serves an overriding public interest;**
  - c) **insert *de minimis* provisions in line with the thresholds in the Environmental Impact Assessment Directive?**
- **Q.12 What are your views on amending this provision so that it only requires mitigation of new soil sealing through use of permeable construction materials?**
- **Q.13 Do you agree with our concerns and our assessment of the costs and benefits as set out in our initial RIA?**

## **Part 4 - Chapter II: Articles 6-8 – Risk Prevention, Mitigation And Restoration**

### **Article 6 – Identification of risk areas of erosion, organic matter decline, compaction, salinisation and landslides**

1. Within five years from [transposition date], Member States shall identify the areas in their national territory, at the appropriate level, where there is decisive evidence, or legitimate grounds for suspicion, that one or more of the following soil degradation processes has occurred or is likely to occur in the near future, hereinafter “the risk areas”:

- a) erosion by water or wind;
- b) organic matter decline brought about by a steady downward trend in the organic fraction of the soil, excluding undecayed plant and animal residues, their partial decomposition products, and the soil biomass;
- c) compaction through an increase in bulk density and a decrease in soil porosity;
- d) salinisation through the accumulation in soil of soluble salts;
- e) landslides brought about by the down-slope, moderately rapid to rapid movement of masses of soil and rock material.

For the purposes of that identification, Member States shall, in respect of each of those soil degradation processes, use at least the elements listed in Annex I and shall take into account the effects of those processes in exacerbating greenhouse gas emissions and desertification.

2. The risk areas identified pursuant to paragraph 1 shall be made public and reviewed at least every ten years.

### **Article 7 – Methodology**

Member States may base the identification of risk areas on empirical evidence or on modelling. If modelling is used, the models must be validated by comparing the results on the basis of empirical data which have not been used for the development of the model itself.

### **Article 8 – Programmes of measures to combat erosion, organic matter decline, compaction, salinisation and landslides**

1. For the purposes of preserving the soil functions referred to in Article 1(1), Member States shall in respect of the risk areas identified in accordance with Article 6, draw up, at the appropriate level, a programme of measures including at least risk reduction targets, the appropriate measures for reaching those targets, a timetable for the implementation of those measures and an estimate of the allocation of private or public means for the funding of those measures.

2. When drawing up and revising the programmes of measures pursuant to paragraph 1, Member States shall give due consideration to the social and economic impacts of the measures envisaged.

Member States shall ensure that measures are cost-effective, technically feasible and shall carry out impact assessments, including cost-benefit analyses, prior to the introduction of the programmes of measures.

Member States shall indicate in their programmes of measures how the measures are to be implemented and how they will contribute to achievement of the environmental targets established.

3. Where an area is at risk from different concurrent soil degradation processes, Member States may adopt a single programme in which appropriate risk reduction targets are to be set for all the risks identified together with the appropriate measures for reaching those targets.

4. The programme of measures shall be drawn up within seven years from [transposition date] and shall be in application no later than eight years after that date.

The programme of measures shall be made public and shall be reviewed at least every five years.

## **Content**

4.1 The proposed Article 6 requires Member States to identify all areas in their national territory where there is decisive evidence or legitimate grounds for suspicion that one or more of the following soil degradation processes have occurred or are likely to occur in the near future: erosion; organic matter decline; compaction; salinisation; and landslides. To identify these 'risk areas' Member States must conduct risk assessments using the factors in Annex I of the proposed Directive. Where risk areas are identified, these must be made public and reviewed every ten years.

4.2 The proposed Article 7 sets out the methodology for identifying these risk areas and allows for modelling or the use of empirical evidence.

4.3 The proposed Article 8 requires Member States to adopt programmes of measures in respect of these risk areas including risk reduction targets, appropriate measures for achieving these targets and a timetable for doing so. There is some lack of clarity as to whether these programmes need only aim to reduce the risk of erosion or whether they should also aim to secure some restoration of the land. In drawing up their programmes of measures, Member States are required to take into account the social and economic impacts of the programme of measures. They are also required to ensure that measures introduced are cost-effective.

## **Existing EC/domestic legislation**

4.4 **The Water Framework Directive (WFD)** - this requires programmes of measures to achieve water quality targets in relation to bodies of water. Where soil erosion or the condition of the soil is a cause of water quality problems, it will need to be tackled. Programmes of Measures are being developed across the UK to identify priorities for different types of preventative or remedial action, targeted at national,

catchments, and specific water body scales. It does not cover soil erosion where this does not impact upon water quality.

**4.5 Catchment Sensitive Farming (CSF)** - CSF initiatives, plus Monitored Priority Catchments (MPCs) in Scotland, have been established to help the UK meet Water Framework Directive objectives, and aim to encourage soil management change at the catchment level. This includes promoting both the soil management planning process and the uptake of agri-environment scheme options.

**4.6 CAP cross-compliance** - This requires Member States to introduce measures (Good Agricultural Environmental Conditions – GAEC) to deal with erosion, soil organic matter and soil structure (including compaction). The approach taken was to set a baseline for all farmers rather than a risk-area approach as under the proposed Directive. The objective underlying the soil organic matter standard was not the protection of soil carbon for climate change related reasons. In practice this may mean that implementation of the proposed Soil Framework Directive would require a higher standard of protection for soil carbon than cross-compliance. (It may, however, be that this can be done through agri-environment schemes).

**4.7** The GAEC soils requirements have been implemented in England, Wales and Scotland, largely by requiring farmers to carry out an assessment of risk on their farms and adopt appropriate measures accordingly.

**4.8 CAP Agri-environment** - The UK has developed a range of options under agri-environment schemes to encourage farmers to address any threats to soil that demand more specific management than complying with the GAEC standards. Payments are available to encourage farmers to employ management practices which reduce soil erosion and run-off, and improve and protect water and soil quality.

**4.9 Habitats Directive** - The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures Member States are required to take account of economic, social and cultural requirements and regional and local characteristics. As soils underpin all terrestrial ecosystems and as “peat habitats” which are valuable carbon stores form an intrinsic part of the designated features, the Habitats Directive provides a means to protect soil and its habitat support functions where designated areas are concerned.

## **Article 6 and 7 – Identification of risk areas**

### **Issues raised**

**4.10** We are concerned that it may be difficult and potentially expensive to map risk areas for soils to the degree of precision that is required for policy purposes. Mapping risk areas for soil compaction in particular is likely to be expensive and to deliver few benefits as compaction related issues depend mainly on management practices rather

than soil type. Farmers may prefer to be outside risk areas and may appeal against any findings. This will add to administrative costs.

4.11 In addition, there may be limited benefits to this exercise if the proposed Article 4 will require a different analysis of risk and possibly measures that cover the whole farming community in any event.

4.12 As well as loss of the soil resource, soil erosion presents a further issue when it leads to sediment in watercourses or on infrastructure including roads. The Water Framework Directive addresses erosion which leads to sediment in watercourses and further mapping of erosion risk beyond what is required by the WFD may not yield significant benefits.

4.13 The importance of protecting carbon stores in our soils is recognised; Article 6 as drafted defines carbon as only including the stable component of carbon in our soils. However, less stable components, such as partly decayed plant material, are relevant to soil structure and fertility, suggesting that the definition should be broader. This component of soil is, however, affected by land use and management practices and soil maps would have to be very detailed to identify risk areas.

4.14 Salinisation is not a risk in Great Britain and we would be concerned about having to map it for this reason. We would also like to be able to continue to use 'managed retreat' to deal with rising sea water levels. Landslides pose risks in many areas of Great Britain and can be important in relation to risks to infrastructure and development. However, a risk assessment of the whole of Great Britain may not be proportionate.

4.15 The proposed Directive is not clear about the level of risk that would make an area a "risk-area". It may be more proportionate for areas at significant or unacceptable risk to be identified.

4.16 The methodology set out in Annex 1 of the proposal, which sets out how Member States must go about mapping risk areas, is unnecessarily prescriptive. This sets out the factors to be taken account of in identifying risk areas.

### **Initial Regulatory Impact Assessment - costs and benefits**

4.17 Our initial RIA suggests that an additional £150k (for England and Wales only) would be required to identify risk areas if definitions currently used in the UK are applied and compaction, landslides and salinisation excluded. A further c.£500k would be required if re-sampling of Soil Organic Matter (SOM) is required (unclear at present if current UK data on SOM is compatible with requirement under Article 6.1(b) as drafted). Further expenditure would be required to complete the exercise for Scotland and Northern Ireland. Note also that Article 18 of the draft Directive allows the Commission to alter the criteria which Member States are required to use in identifying risk areas – this may result in additional costs. Costs may also be affected by the scale at which Member States are required to identify risk areas.

4.18 The requirement to identify areas at risk of organic matter loss (and implement a programme of measures to respond to this) may deliver slight environmental benefits

through improved information allowing for more targeted action to deal with identified soil threats.

4.19 Level playing field – UK land managers may be better able to compete with some other Member States who would have to increase levels of soil protection above current levels to comply with the proposed Framework Directive. Considering the wide discretion that will be allowed in relation to programmes of measures, it is considered that the benefits will not be substantial.

## **Questions**

- **Q.14 Do you consider that this risk-area/programme of measures approach is appropriate? How do you consider that this provision could be improved, for example, what are your views on requiring Member States to put in place programmes of measures to address degradation processes with an adequate focus on higher risk areas and higher risk activities (but without requiring formal identification of risk areas) or requiring more clearly harmonised standards?**
- **Q.15 Is there a significant benefit, in your view, in having a common EU-wide framework in place?**
- **Q.16 Do you consider that the correct degradation processes have been listed for the purpose of identifying risk areas? What are your views on seeking to have compaction removed from this list so that it is dealt with only under the proposed Article 4?**
- **Q.17 Do you consider that the definitions of soil erosion, soil carbon and the other degradation processes are correct considering the range of soil functions which the proposed Directive seeks to protect?**
- **Q.18 What are your views on the inclusion of salinisation as a threat – do you consider that it should be defined to exclude managed retreat?**
- **Q.19 If the proposed Directive were to require detailed risk-mapping, is it important for it to require Member States to use all the Annex I factors or could the methodology be left to individual Member States?**
- **Q.20 Do you agree with our concerns and our estimate of the costs and benefits of this provision?**

## **Article 8 – Programmes of measures**

### **Issues raised**

4.20 There is a lack of clarity as to whether all risks need to be addressed and the extent to which risks need to be reduced and whether restoration of soils is required.

4.21 Cross-compliance measures and agri-environment schemes cover the vast majority of UK agricultural land. It is important to avoid adding to existing measures without good cause. In addition, it is important to give farmers some time to understand and learn to comply with existing measures and avoid unnecessary change. Hence, it is important that Member States are given the flexibility to continue to use such schemes, perhaps with some minor modifications if necessary.

4.22 It would be consistent with UK policy to use incentive-based schemes, like environmental stewardship, as well as voluntary codes and other measures as part of the programme of measures. It is anticipated that these can form part of our programme of measures.

### **Initial Regulatory Impact Assessment - costs and benefits**

4.23 Additional administrative burden on the Government in drawing up the 'programme of measures', undertaking research to set targets, monitoring progress against targets and reviewing programmes of measures.

4.24 Potential additional administrative burdens and compliance costs for land managers (in particular small businesses and those in risk areas), in adjusting to changes made to existing soil protection measures.

4.25 Environmental and economic benefits are as explained in relation to the proposed Article 6.

### **Questions**

- **Q.21 How important do you think it is for us to be permitted to continue to use existing CAP measures (cross-compliance and agri-environment) to deliver the required Programme of Measures? Do you think such existing measures in their current form are adequate for addressing soils issues in high risk areas?**
- **Q.22 Would you like the Government to be able to use a range of measures, from guidance and codes of practice to regulations, to implement this proposed Article?**
- **Q.23 Do you agree with our concerns and our estimate of costs and benefits?**



## Part 5 – Chapter III: Articles 9-14 – Soil Contamination

### Article 9 – Prevention of soil contamination

#### Article 9 – Prevention of soil contamination

For the purposes of preserving the soil functions referred to in Article 1(1), Member States shall take appropriate and proportionate measures to limit the intentional or unintentional introduction of dangerous substances on or in the soil, excluding those due to air deposition and those due to a natural phenomenon of exceptional, inevitable and irresistible character, in order to avoid accumulation that would hamper soil functions or give rise to significant risks to human health or the environment.

#### Content

5.1 This provision is about preventing new contamination rather than dealing with already contaminated land. Provisions for identifying and dealing with land where contamination is present are drafted at Articles 10-14.

#### Existing EC/domestic legislation

5.2 This provision largely overlaps with other community legislation which aims to prevent pollution and where contamination occurs requires its remediation. This includes:

- **The Integrated Pollution Prevention and Control Directive:** the Pollution Prevention and Control Regulations which implement this set up a licensing system for current activities which may cause pollution, and include clean-up mechanisms for new contamination, and a requirement to leave sites in a “satisfactory state” at the end of authorised activity. The Regulations cover all environmental media including soil and cover over 4500 industrial installations in the UK.
- **Environmental Liability Directive:** the Environmental Liability Directive (ELD) includes measures to secure remediation of new environmental damage, and provides a further lever for the prevention of contamination by operators of potentially polluting activities. The ELD covers the prevention of contamination issues addressed by the proposed Soil Framework Directive, but not historic contamination.
- **Waste Framework Directive and Landfill Directives:** licensing arrangements, and licensing exemptions, introduced to implement these Directives aim to prevent waste management activity causing land contamination (amongst other risks). The controls also include measures to remedy the effects of illegal dumping and fly-tipping on land.

## Issues raised

5.3 It is not clear that this provision is necessary considering existing legislation. In addition, having this additional provision without the thresholds, exemptions and other detail of the Directives referred to above, causes legal uncertainty as to exactly what Member States are required to do. Clarity is required in the text as to how Article 9, as drafted, relates to these existing Directives.

5.4 The use of the term “appropriate and proportionate measures” creates uncertainty – it is not clear exactly what Member States must do and whether judgement as to the measures which are appropriate is for Member States or for the Commission.

5.5 Clarity is also required as to the relationship between the proposed Article 9 and Article 4. In particular, is Article 9 intended to cover all forms of contamination and is this in effect excluded from Article 4?

## Questions

- **Q.24 Are there any benefits in having this provision?**
- **Q.25 How do you think this proposed Article could be amended to improve it?**  
**Examples include:**
  - **So the proposed Directive states that full implementation of existing pollution prevention and waste legislation might be sufficient for implementation.**
  - **So the proposed Directive states specifically what risks or activities must be addressed.**

## Articles 10 and 11 – Inventory of contaminated sites

### Article 10 - Inventory of contaminated sites

1. Member States shall, in accordance with the procedure laid down in Article 11, identify the sites in their national territory where there is a confirmed presence, caused by man, of dangerous substances of such a level that Member States consider they pose a significant risk to human health or the environment, hereinafter “contaminated sites”.

That risk shall be evaluated taking into account current and approved future use of the land.

2. Member States shall establish a national inventory of contaminated sites, hereinafter “the inventory”. The inventory shall be made public and reviewed at least every five years.

## **Article 11 - Identification procedure**

1. Each Member State shall designate a competent authority to be responsible for the identification of contaminated sites.

2. Within five years from [transposition date], the competent authorities shall have identified the location of at least the sites where the potentially soil-polluting activities referred to in Annex II are taking place or have taken place in the past.

For those purposes, the activities referred to in point 2 of Annex II shall be considered independently of the thresholds specified in Annex I to Council Directive 96/61/EC14, except for the activities carried out by micro-enterprises, as defined in point 3 of Article 2 in the Annex to Commission Recommendation 2003/361/EC, and those relative to the rearing of livestock.

The identification shall be reviewed at regular intervals.

3. In accordance with the following time-table, the competent authorities shall measure the concentration levels of dangerous substances in the sites identified in accordance with paragraph 2, and where the levels are such that there may be sufficient reasons to believe that they pose a significant risk to human health or the environment, an onsite risk assessment shall be carried out in relation to those sites:

- a) within five years from [transposition date], for at least 10% of the sites;
- b) within 15 years from [transposition date], for at least 60% of the sites;
- c) within 25 years from [transposition date], for the remaining sites.

## **Content**

5.6 These proposed Articles deal with the establishment of a national inventory of contaminated sites. Article 10, as drafted, requires a public inventory of contaminated sites, as defined, to be compiled and reviewed every 5 years. Article 11 goes on to describe the process by which Member States should go about identifying these contaminated sites.

5.7 Contaminated sites are defined as those “where there is a confirmed presence, caused by man, of dangerous substances [as defined in the proposed Article 2] of such a level that Member States consider they pose a significant risk to human health or the environment”.

5.8 In considering whether the risk posed to human health or the environment is significant, account should be taken of what the site is being used for currently, and also of any approved future use of the site. The above description of “contaminated sites” gives Member States some discretion in deciding what level of dangerous substance should be regarded as causing a significant risk.

5.9 The proposed Article 11 lays down the process by which Member States must identify contaminated sites. This involves a three stage procedure:

- i. Identify at least all sites where “potentially soil-polluting activities” listed in Annex II<sup>12</sup> are taking place, or have taken place in the past. This must be completed within 5 years of the proposed Directive being transposed into domestic legislation. The list of sites identified at this stage should be reviewed regularly.
- ii. For the sites identified under (i), competent authorities must “measure the concentration levels of dangerous substances”.
- iii. Where the concentration levels determined are such that there may be sufficient reasons to believe that a site poses a significant risk to human health or the environment, an “on-site risk assessment” must be carried out. Where this on-site risk assessment confirms that the site is a “contaminated site” it must be recorded on the inventory.

5.10 This procedure must be carried out in 5-25 years from the date of transposition, with 10% having to be identified within 5 years, 60% within 15 years and the remainder within 25 years.

### **Existing EC/domestic legislation**

5.11 There is no EU-wide legislation that specifically addresses historically contaminated land. Some of the Directives identified at paragraph 5.2 do however effectively require remedial action where, for example, activities such as waste management or operating specified industrial activities give rise to new land contamination. In addition, the Water Framework Directive and Groundwater (Daughter) Directive, which are currently being implemented, may effectively require remediation of contaminated land where it is found to affect water quality. The requirements under these Directives are explained in paragraphs 5.16-5.17.

5.12 In terms of domestic legislation, the Commission states that, as of September 2006, only 9 Member States had a specific domestic regime in place.

5.13 We already have a comprehensive regime for identifying contaminated land, covering all contaminants (i.e. not limited to dangerous substances) and all activities or sources (except where remedies are available in other domestic legislation). Development is the main driver for bringing such land back into beneficial use and the aim of planning policy is to facilitate sustainable development that takes appropriate account of contaminated land issues. This means that property developers generally meet the costs of remediation. Local Planning Authorities should require an applicant for planning permission where contamination is known or suspected to provide sufficient information to determine the existence or otherwise of contamination, its nature and the risks it may pose, and whether these can be satisfactorily reduced to an acceptable level. Further investigation and remediation can be required as a condition of planning permission to secure the removal of unacceptable risk and make the site

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<sup>12</sup> Amongst a number of other potentially soil-polluting activities, Annex II of the Soil Framework Directive also covers all the industrial activities listed in Annex I of the Integrated Pollution Prevention and Control (IPPC) Directive. The thresholds included in the IPPC Directive are disapplied, except in the case of activities relating to the rearing of livestock, and activities carried out by enterprises which employ fewer than 10 people, and have an annual turnover of less than €2 million (£1.4 million).

suitable for its new use. The planning register will record details of the permission, conditions and discharge of conditions.

5.14 The planning system is complemented by a pro-active approach under the Environmental Protection Act 1990. Under Part IIA of this Act, Local Authorities have an ongoing duty to inspect their areas for “contaminated land” as defined – in broad terms this covers land in such a condition, by reason of the presence of substances, that it presents unacceptable risk to human health or the environment. Appropriate remedial action must be secured. Contaminated land and actions taken in respect of it are recorded in a public register. In England and Wales, sites are only placed on a register when a remediation notice, statement or declaration is issued. In Scotland details appear at an earlier stage, when contaminated land is identified. In England and Wales, local Authorities are the lead regulators, but certain specified descriptions of contaminated land, once identified, are dealt with by the Environment Agency, which is better placed to enforce in those cases.

5.15 Part IIA strongly encourages voluntary action (by agreement rather than through formal enforcement action), allows liability to be passed on when land changes hands, ensures land condition and liabilities are reflected in land values, and encourages buyers, sellers, lenders and conveyancers, etc, to exercise considerable care in land transactions wherever there is a possibility of contamination. Much investigation and remediation takes place either voluntarily or under the planning system, without formal action being taken under Part IIA.

5.16 Scotland, Wales and England all have similar measures in place, and Northern Ireland is due to implement provisions similar to the above shortly.

5.17 In addition to the existing measures already in place to address contamination, a number of other measures will be implemented in the near future. For example, the Water Framework Directive (WFD) establishes a process for setting environmental targets for bodies of water which Member States are required to meet through the implementation of programmes of measures. Historic land contamination is among the continuing sources of water contamination. The Water Framework Directive will thus act as a driver for increased remediation of contaminated sites (largely via existing mechanisms such as the **Water Resources Act** in England and Wales, the **Controlled Activities Regulations** in Scotland, or Part IIA of the Environmental Protection Act), thus enabling the UK to meet the objectives established under the WFD. Consultation papers are being issued in 2007 concerning the issue of new diffuse pollution which can arise when land is used in ways which enable harmful substances to enter groundwater or other water bodies.

5.18 The new **Groundwater Directive** (a daughter Directive to the Water Framework Directive) includes specific obligations to prevent and/or limit the entry of listed pollutants into groundwater. Historic land contamination can give rise to the ongoing entry of such pollutants. As with the Water Framework Directive, this is expected to act as a driver for Member States to increase the levels of protection afforded to water courses by utilising existing measures.

## Issues raised

5.19 The proposed Directive's approach to identification of land requiring action differs from our approach in a number of key areas: (1) it is confined to 'dangerous substances', as defined in the proposed Article 2, and requires measuring "levels" of these substances to assess risk; (2) it lays down a list of potentially polluting activities; (3) it requires the locating and sampling of all sites upon which such activities have ever taken, or are taking, place, regardless of circumstances; and (4) identification of all 'contaminated sites' must be carried out to a prescribed timetable.

5.20 Based on our preliminary analysis (see Annex I of the Initial RIA), we anticipate that the costs of establishing a national inventory of contaminated sites according to the proposed Directive's requirements would far outweigh any benefits that such an inventory might deliver.

5.21 The approach under these proposals is only partially risk-based. For example, risks to human health and the environment are not only associated with concentrations levels of substances in soil. Landfill gas is one example where severe risk might not be reflected in surface soil concentrations. The provisions also appear to require Member States to sample the concentration levels of **all** dangerous substances at sites on which a potentially soil polluting activity has taken place, even though only a small number of substances are normally associated with any particular potentially polluting activity<sup>13</sup>.

5.22 Furthermore, sampling of potentially polluted sites is required without any regard to whether this is justified by the available facts on each site. A more risk-based approach would allow for consideration of, for example, existing information about the site and its history; of previous investigations or remedial measures; and the likelihood that if there are dangerous substances present on the site they could actually cause harm to human health or the environment (in particular to consider whether there is a potential pathway by which the substance might reach a vulnerable receptor, and also whether there is such a receptor present or likely to be present under the current or approved future use).

5.23 There is a risk of unnecessary property blight as a result of the sampling obligation applying to whole classes of land. There may also be a risk of blight where land is identified as a contaminated site (in compliance with the timetable) but resources to undertake remediation are not immediately available. Since the extent of contamination and the unit costs of dealing with it are considerable, this scenario is likely to arise under the proposed Directive's timetable for identification.

## Initial Regulatory Impact Assessment - costs and benefits

5.24 The cost of mandatory sampling of every 'Annex II' site, to establish concentration levels of dangerous substances which may be on site is high. The Commission estimate that 100,000<sup>14</sup> sites would require such preliminary sampling in

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<sup>13</sup> Note that in Article 12 (2) the requirement to sample the concentration levels of dangerous substances only applies to "those substances that are linked to the potentially polluting activity on the site". The Commission says, informally, that this is how Article 11 should be read.

<sup>14</sup> Environment Agency 2002 – 'Dealing with Contaminated Land in England' Report

the UK. This figure is based on an Environment Agency report, relating to England and Wales only. The actual figure could be significantly higher. Based on a sampling and analysis cost averaging £10-20k for a 2 hectare (average size) site, the estimated total cost of this sampling is **£1-2 billion**<sup>15</sup>. This is largely an additional cost to those incurred under our domestic system, under which sampling is not an automatic requirement across whole classes of land, and which does not contain a national timetable for the identification of sites. The reliable identification of all Annex II sites would be costly, because the status of many historic locations may not be clear from available records (for example, numbers of employees or turnover, or quantities of dangerous substances held at the location).

5.25 Where the level of contamination determined by the preliminary sampling of Annex II sites suggests a possible significant risk to human health or the environment, a full site investigation and site-specific risk assessment will be required. In Great Britain, this costs on average £50-75k per site (average 2 hectare). If 5-20% of identified Annex II sites require this further investigation, total costs in excess of **£250 million - £1.5 billion** could arise. Some of this cost will be incurred in any event under our domestic approaches to land contamination, but the proposed Directive's timetable means that this will need to be incurred at an earlier date.

5.26 The strict timetable for the inventory may also present capacity problems as sampling and risk assessment is a highly skilled, complicated job.

5.27 The requirement to review the inventory of contaminated sites also likely to incur very significant costs (though these are not analysed in the Commission's Impact Assessment).

5.28 The benefits which are difficult to quantify would include earlier identification and remediation of contaminated sites with potential benefits for human health and the environment.

## Questions

- **Q.26 Do you agree with the costs and benefits identified in our preliminary analysis? How do you think the proposed Directive could be amended to reduce the costs involved whilst achieving the same benefits?**
- **Q.27 Should the proposed Directive enable Member States to retain their existing national approaches to the identification of contaminated land, provided these deliver some basic common requirements, or should they be required to follow a common detailed procedure? If so, what are the basic common requirements that can in your view reasonably be included in the proposed Directive?**

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<sup>15</sup> Note that in connection with the Environment Protection Act (Part IIA), local authorities undertake inspection of individual sites, but this is carefully targeted to sites which warrant it according to evidence and a carefully drawn-up inspection strategy and prioritised programme. This will result in a minor reduction to the total costs of site investigations as described under Option 2.

- **Q.28 What are your views on the Commission's definition of contaminated sites? Is it appropriate?**
- **Q.29 What are your views on the list of potentially polluting activities set out in Annex II?**
- **Q.30 Do you consider that it is necessary to test for dangerous substances at all sites on which potentially polluting activities have taken place or do you think testing should be targeted based on a risk assessment?**
- **Q.31 Do you think the timescales given in the draft Directive for compiling and reviewing the inventory are reasonable?**
- **Q.32 How do you think this requirement will affect land values?**

## **Article 12 - Soil status report**

### **Article 12 – Soil status report**

1. Where a site is to be sold on which a potentially polluting activity listed in Annex II is taking place, or for which the official records, such as national registers, show that it has taken place, Member States shall ensure that the owner of that site or the prospective buyer makes a soil status report available to the competent authority referred to in Article 11 and to the other party in the transaction.
2. The soil status report shall be issued by an authorised body or person appointed by the Member State. It shall include at least the following details:
  - a) the background history of the site, as available from official records;
  - b) a chemical analysis determining the concentration levels of the dangerous substances in the soil, limited to those substances that are linked to the
  - c) potentially polluting activity on the site;
  - d) the concentration levels at which there are sufficient reasons to believe that the dangerous substances concerned pose a significant risk to human health or to the environment.
3. Member States shall establish the methodology necessary for determining the concentration levels referred to in paragraph 2(b).
4. The information contained in the soil status report shall be used by the competent authorities for the purposes of identifying contaminated sites in accordance with Article 10(1).



## **Content**

5.29 This obligation applies to all sites on which there has been a potentially polluting activity as listed in Annex II. It appears to apply to every proposed sale of such land in perpetuity. Whether the duty should be placed on the buyer or the seller is left to Member States to decide.

## **Issues raised**

5.30 This proposed Article may interfere, without any benefit, with national procedures for transfers of land. In Great Britain there is provision for disclosure of information relating to contamination and buyers are free to further investigate the risk involved for them as they choose.

5.31 It risks stigmatising and blighting any land which has ever been subjected to a potentially contaminating use, even after it has been remediated. Anyone selling property or land on which an Annex II activity has taken place may find the value of that investment disproportionately reduced because of the cost and time involved in preparing this report. Such effects would be additional to any arising from the obligation in the proposed Article 10 to identify and sample all Annex II sites.

5.32 We believe that we already have a successful policy for building on previously used land, thereby preserving undeveloped land and soil functions. As drafted, any housing built on an Annex II site, even when it has been cleaned up so as to be suitable for its approved use, or found not to warrant action, would fall within the scope of the proposed Article 12.

5.33 The Commission's Impact Assessment (which accompanied publication of the proposed Soil Framework Directive) contains no information on the likely number of transactions in the EU which will require Soil Status Reports (SSRs). We believe that millions of transactions take place annually, and are likely to result in significant costs.

5.34 We are concerned that there may not be sufficient capacity in Great Britain to conduct all the soil status reports that will be required.

## **Initial Regulatory Impact Assessment - costs and benefits**

5.35 Millions of transactions likely across EU-25 imposing significant administrative and economic costs on all property transactions. We have not yet identified exactly what this cost will be.

5.36 There is potential for land and property blight. Whilst it is not yet fully clear how property markets will react, the requirement to produce SSRs may push down the value of this land. We are concerned that this may happen even when the land presents no risk and when the current land owner was not responsible for the contamination.

5.37 UK businesses, including major industry and property sectors likely to incur administrative and financial costs to meet SSR requirements. Homeowners would also face additional costs.

5.38 The Commission's Impact Assessment does not take account of the potentially significant additional costs associated with establishing monitoring and enforcement regimes to ensure SSR provisions are met.

## Questions

- **Q.33 How do you think this provision could best be amended to minimise any possible negative impacts that this proposed Article may have in Great Britain?**
- **Q.34 What are your views on the costs and benefits of this provision? What effect do you think this will have on land prices?**
- **Q.35 What do you think are the public health/environmental benefits of the requirement to produce Soil Status Reports? Do you consider that they will benefit business activity?**

## Articles 13 and 14 – Remediation

### Article 13 – Remediation

1. Member States shall ensure that the contaminated sites listed in their inventories are remediated.
2. Remediation shall consist of actions on the soil aimed at the removal, control, containment or reduction of contaminants so that the contaminated site, taking account of its current use and approved future use, no longer poses any significant risk to human health or the environment.
3. Member States shall set up appropriate mechanisms to fund the remediation of the contaminated sites for which, subject to the polluter pays principle, the person responsible for the pollution cannot be identified or cannot be held liable under Community or national legislation or may not be made to bear the costs of remediation.

### Article 14 – National Remediation Strategy

1. Member States shall, on the basis of the inventory and within seven years from [transposition date], draw up a National Remediation Strategy, including at least remediation targets, a prioritisation, starting with those sites which pose a significant risk to human health, a timetable for implementation, and the funds allocated by the authorities responsible for budgetary decisions in the Member States in accordance with their national procedures.

Where containment or natural recovery are applied, the evolution of the risk to human health or the environment shall be monitored.

<p>2. The National Remediation Strategy shall be in application and be made public no later than eight years after [transposition date]. It shall be reviewed at least every five years.</p>
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## **Content**

5.39 Article 13, as drafted, requires Member States to remediate all contaminated sites appearing in their inventory. Remediation is deemed to have taken place when a contaminated site no longer poses any significant risk to human health or the environment, based on the sites current use and any approved future use. Remediation should be conducted via the "removal, control, containment or reduction of contaminants".

5.40 The proposed Directive suggests that in most cases the polluter should pay for the remediation of contaminated sites (although it does not expressly require this). Member States must set up "appropriate mechanisms" to fund remediation in cases where the polluter either cannot be found, or cannot be held liable for the costs of remediation.

5.41 Under the proposed Article 14, Member States must draw up a 'National Remediation Strategy' within seven years of transposition, which should be in place and made public within eight years of transposition. This Strategy should be based on the inventory of contaminated sites, and must include remediation targets, an implementation timetable, and details of how funding is to be allocated. The Strategy should also prioritise the order in which sites are remediated, with those posing a significant risk to human health to be dealt with first. The Strategy must be reviewed every five years.

5.42 Where containment or natural recovery are used as the methods of remediation, the level of risk posed must be monitored.

## **Issues raised**

5.43 Land affected by contamination is very often dealt with under the land use planning regime, with the costs of any remedial works largely falling to the developer/land owner. The approach of the proposed Directive may impose significant costs on Member States (and thus the tax-payer), if it undermines the successful and largely voluntary approaches currently in place. It is possible that developers will be discouraged from incurring costs themselves if they know that Member States have to ensure remediation of the land, especially if a public timetable is in place. It is also unclear how the Directive might affect transfer of potential liability for remediation when land transactions take place.

5.44 The timetable for identification of contaminated sites could also mean public pressure to remediate in advance of development plans which might address the problem. A detailed "national remediation strategy" including timetables and details of public funds available, could thus have unpredictable effects on remediation activity by polluters, owners or developers.

5.45 Though the Directive specifies a range of methods to remediate land, it does not appear to provide for cases where the standard of remediation might not be fully attainable technically, or could entail disproportionate cost or environmental dis-benefits where it may be best to simply restrict access. In addition, this provision does not take into account that the Environmental Liability Directive and Integrated Pollution Prevention Control Directive and other measures require action to be taken in response to future contamination in many situations.

### **Initial Regulatory Impact Assessment - costs and benefits**

5.46 Given the timetable required under Article 14 of the proposed Directive, the proposals may lead to remediation of some sites at a cost to the public sector where these would otherwise have been voluntarily remediated, as the timetable may deter developers from spending large amounts of money on remediation where this is due to be done by the Government. Also, Article 13(3), as drafted, suggests that either the polluter pays or otherwise payment should be made through mechanisms set up by Member States.

5.47 The proposed requirements for the remediation of contaminated sites do not clearly provide for balancing of costs and benefits, nor consideration of practicability, or possible adverse environmental impacts, to be taken into account. This may mean that unnecessary costs would be incurred, for example where the best practical means of remediation might be to restrict or remove the vulnerable receptor, thus reducing potential exposure.

5.48 There is an additional administrative burden on the Government in drawing up the 'National Remediation Strategy'. There is also potential for drawing up such a Strategy to become cumbersome and expensive as future contamination is also covered. This will mean constantly updating this strategy.

### **Questions**

- **Q.36 Do you agree that contaminated sites as defined should be remediated? Do you think these provisions could be amended to make them more proportionate? If so, how?**
- **Q.37 Should this provision be aligned with existing European Directives (as outlined in paragraph 5.2), so that where they apply, those Directives' arrangements concerning remedies will operate as now?**
- **Q.38 Do you agree with the costs and benefits identified in our preliminary analysis? How do you consider these costs could be reduced whilst achieving the same or similar benefits?**
- **Q.39 What are your views on requiring Member States to put in place appropriate mechanisms to fund remediation of orphan sites?**

- **Q.40 What are your views on requiring Member States to have a public ‘National Remediation Strategy’ in place? Do you think this will affect existing national approaches such as remediation by developers?**

## **Part 6 – Chapter 4: Articles 15-17 – Awareness Raising, Reporting And Exchange Of Information**

### **Article 15 – Awareness raising and public participation**

#### **Article 15 – Awareness raising and public participation**

1. Member States shall take appropriate measures to raise awareness about the importance of soil for human and ecosystem survival, and promote the transfer of knowledge and experience for a sustainable use of soil.
2. Article 2(1), (2), (3) and (5) of Directive 2003/35/EC shall apply to the preparation, modification and review of the programmes of measures on risk areas referred to in Article 8 and the National Remediation Strategies referred to in Article 14.

#### **Content**

6.1 Member States must take ‘appropriate measures’ to raise public awareness of the importance of soil, and promote the transfer of knowledge and experience for the sustainable use of soil. Article 2 of the Public Participation Directive (PPD) should be applied to the preparation, modification and review of the programme of measures described in the proposed Article 8, and the National Remediation Strategy described in the proposed Article 14. This would mean that certain steps would have to be taken to ensure that the public is given early and effective opportunities to participate in the preparation and modification or review of these programmes and strategies.

#### **Existing EC/domestic legislation**

6.2 In terms of the application of the Public Participation Directive, there is currently no existing legal obligation to consult on policies like programmes of measures or national remediation strategies generally. It refers to specific Directives. But we are likely to do this in any event.

#### **Issues raised**

6.3 The duty to raise awareness is not considered to cause any significant difficulties. Some progress has already been made in this area under the Soil Action Plan for England. For example, a programme of soils education has been developed, including resources for use in schools and awareness raising has taken place under agricultural schemes such as cross compliance and catchment sensitive farming.

6.4 In Scotland a series of public events continues to champion the importance of soil for our food, landscape, wildlife, water and climate and highlight how soils play a crucial role in our society. The Farm Soil Plan has raised awareness on soil amongst Scottish farmers.

## **Initial Regulatory Impact Assessment - costs and benefits**

6.5 Costs of awareness raising have not been analysed in the Commission's Impact Assessment. However, experience of running awareness raising campaigns suggests set up costs of **£2 million**, with ongoing costs of **£0.5 million p.a.**

### **Questions**

- **Q.41 Do you agree with our concerns and the costs and benefits identified?**
- **Q.42 What are your views on this provision and how could it could be improved?**

## **Article 16 - Reporting**

### **Article 16 – Reporting**

1. Member States shall make the following information available to the Commission within eight years from [transposition date], and every five years thereafter:

- a) a summary of the initiatives taken pursuant to Article 5;
- b) the risk areas established pursuant to Article 6(1);
- c) the methodology used for risk identification pursuant to Article 7;
- d) the programmes of measures adopted pursuant to Article 8 as well as an assessment of the efficiency of the measures to reduce the risk and occurrence of soil degradation processes;
- e) the outcome of the identification pursuant to Article 11(2) and (3) and the inventory of contaminated sites established pursuant to Article 10(2);
- f) the National Remediation Strategy adopted pursuant to Article 14;
- g) a summary of the initiatives taken pursuant to Article 15 as regards awareness raising.

2. The information referred to in paragraph 1(b) shall be accompanied by metadata and shall be made available as documented digital georeferenced data in a format that can be read by a geographic information system (GIS).

### **Issues raised**

6.6 Communicating what soil we have and what threats they are subject to will not be a problem in relation to risk identification and the related programme of measures, as we already have GIS systems in place that can do much of this. Data on contamination is widely available and information on sealing is available.

6.7 The requirement to make information for reporting purposes on the identified risk areas available in a format that can be read by GIS seems unnecessary. There has been no analysis of the costs and benefits of this or any explanation as to how the Commission or others will use the data.

6.8 It is unlikely that the methodology for identifying risk areas will change, so we would suggest that the requirement should only be to report if it does change.

### Questions

- **Q.43 What are your views on this provision and how could it be improved?**

### Article 17 – Exchange of Information

#### **Article 17 – Exchange of information**

Within one year from [entry into force], the Commission shall set up a platform for the exchange of information between Member States and stakeholders on the risk area identification pursuant to Article 6 and on risk assessment methodologies for contaminated sites currently in use or under development.

### Issues raised

6.9 It is unclear how this “platform for the exchange of information between Member States and stakeholders” will work. We will seek more information on how this will work and what benefits it will deliver for Member States.

6.10 The provision is narrow and should also allow for exchange of other information, such as best practice on means of mitigating soil sealing, acceptable levels of risk, etc.

6.11 It is unclear if the Commission want information specific to methodologies ‘currently in use or under development’ or information on methodologies specific to contaminated sites ‘currently in use or under development’.

### Questions

- **Q.44 Do you consider that this platform for the exchange of information would be useful for the Government and stakeholders?**
- **Q.45 Is this too narrow a range of information? If so, what else should be included?**



## **Part 7 – Chapter 5: Articles 18-26 – Final Provisions**

### **Article 18 – Implementation and adaptation to technical progress**

#### **Article 18 – Implementation and adaptation to technical progress**

1. The Commission may, in accordance with the regulatory procedure with scrutiny referred to in Article 19(3), adapt Annex I to technical and scientific progress.
2. Where, on the basis of the exchange of information referred to in Article 17, a need to harmonise the risk assessment methodologies for soil contamination is identified, the Commission shall adopt common criteria for soil contamination risk assessment in accordance with the regulatory procedure with scrutiny referred to in Article 19(3).
3. Within four years after [date of entry into force], the Commission shall adopt, in accordance with the regulatory procedure referred to in Article 19(2), the necessary provisions on data and metadata quality, utilisation of historical data, methods, access, and data-exchange formats for the implementation of the provisions of Article 16.

#### **Content**

7.1 This proposed Article provides for use of the regulatory procedure for: the adaptation of Annex 1 to technical and scientific progress; to adopt common criteria for soil contamination risk assessment if the exchange of information suggests that this is required; and for the necessary provisions (e.g. on data and metadata quality, methods, access and data-exchange formats) to enable implementation of the proposed Article 16 on reporting. The regulatory procedure involves the Commission and Member State representatives considering measures to be adopted. The Commission will adopt these measures if in accordance with the opinion of the committee. If the measure is not in accordance with the opinion of the committee, the Commission will submit to the Council for its approval proposals relating to the measure in question, as well as informing the European Parliament.

#### **Issues raised**

7.2 We have some concerns over the delegation of this power to Committee as a result of the introduction of the regulatory procedure (explained above).

### **Article 22 – Penalties**

#### **Article 22 – Penalties**

The Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. The Member States shall notify those

provisions to the Commission by the date specified in Article 24 at the latest and shall notify it without delay of any subsequent amendment affecting them.

### **Issues raised**

7.3 It is not entirely clear whether this would prevent the use of measures such as voluntary codes of practice for which there are not penalties for non-compliance. Council Legal Services have advised that this will not prevent the use of such measures, provided they achieve the objectives of the relevant Article. We are considering this issue further.

### **Article 23 – Amendment to Directive 2004/35/EC**

#### **Article 23 – Amendment to Directive 2004/35/EC**

In Article 6 of Directive 2004/35/EC, paragraph 3 is replaced by the following:

“3. The competent authority shall require the remedial measures to be taken by the operator. Subject to Article 13(1) of Directive xx/xx/xx, if the operator fails to comply with the obligations laid down in paragraph 1 or 2(b), (c) or (d) of this Article, or cannot be identified or is not required to bear the costs under this Directive, those measures may be taken by the competent authority itself.”

### **Content**

7.4 Article 6 (3) of the Environmental Liability Directive is replaced.

### **Issues raised**

7.5 The Commission considers it necessary to amend this to allow Member States to fund the remediation of orphan sites. It is not clear to us why this is necessary and we would be concerned about any changes to the ELD as it is being implemented this year, and any changes would cause delay and extra administrative costs at this late stage.

### **Article 24 – Transposition**

#### **Article 24 – Transposition**

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [24 months after the date of entry into force] at the latest. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

<p>2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.</p>
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## **Content**

7.6 Member States shall transpose the proposed Directive into national law within 2 years of the Directive coming into force.

## **Issues raised**

7.7 We have significant concerns regarding these timeframes. Experience on Directives such as the Environmental Liability Directive and the Water Framework Directive suggest that transposition of a Directive is a time consuming process. Successful implementation should be the outcome we are seeking and this would be problematic in 24 months. We would suggest that an implementation period of 3-4 years would be more manageable.

## **Questions in relation to Articles 18-24**

- **Q.46 What are your views on these provisions?**

## Annex A – Summary Of Consultation Questions

The full list of questions, including where they can be found in the document, is summarised below. Where possible please provide explanation and examples to support your response to questions.

### Initial questions (page 13):

- A. What are your views on the current level of soil protection measures in the UK considering the risks and threats faced by soils, including those identified by the Commission?
- B. If you consider these measures to be inadequate, do you believe that any gaps are best dealt with on a common basis across the EU, for example to avoid distortion in competition, or better dealt with at a domestic level?
- C. What, if any, gaps exist in terms of addressing soil protection at an EU level in particular the risks identified by the Commission?
- D. Does the solution to these gaps lie in amending existing EU Directives, or in introducing a new overarching framework for soil protection?
- E. Are there any existing EU provisions that give some protection to soils which, in your view, do not work or which could do with simplification?
- F. In terms of the risks and threats identified by the Commission, how urgent are these problems? Is there sufficient evidence to tackle them now?
- G. Who should bear the costs involved in any new obligations? Should we follow a polluter pays approach, a market-based system where, for example, a property developer pays the cost of remediation, or should these costs fall to taxpayers?

### Detailed questions:

Question number	Question	Page number
Q.1	<b>Article 1:</b> What are your views on the scope of the proposed Directive, in particular the definition of soil and the soil functions which are listed?	15
Q.2	<b>Article 1:</b> Do you think the proposed Directive seeks the right level of protection for our soils?	15
Q.3	<b>Article 1:</b> Do you think it is important for Member States to address natural degradation as well as that caused by human activity?	15
Q.4	<b>Article 2:</b> Do you have any comments on these	16

	definitions? Do you think it is important to clarify any other terms in the proposed Directive?	
Q.5	<b>Article 3:</b> Do you consider there is a significant benefit in expanding the duty, as provided by the proposed Directive, to carry out an environmental assessment in so far as soil is concerned, so that it covers all other sectoral policies which may have a significant impact on soil? If so, which particular sectors of policy do you think impact on soil and need to be covered? And what are your views on leaving out the duty to consult in relation to these additional sectors?	17
Q.6	<b>Article 3:</b> What are your views on how this provision could be improved, for example, should it instead only refer to the SEA Directive in the recitals and include this additional duty in respect of soils only in respect of policies not already covered by the SEA Directive?	17
Q.7	<p><b>Article 4:</b> There are a number of ways in which this proposed Article could be adapted. Please let us have your views on how this provision could be amended. Some possibilities you may wish to consider are:</p> <ul style="list-style-type: none"> <li>○ inclusion of an appropriate <i>de minimis</i> threshold, in terms of area of land affected.</li> <li>○ leaving it to individual Member States to decide which land-users are covered and which activities should be regarded as likely to result in significant harm. This may mean differing levels of care in different Member States but with more flexibility to deal with relevant local issues that may change with time.</li> <li>○ leaving this outcome to be achieved by the EIA and other Directives, and simply requiring Member States to encourage action by land-users more generally to minimise their impact on soil functions.</li> <li>○ exceptions or limits to the duty to prevent or minimise, for example, because some uses serve important social or economic needs, and minimising adverse effects may be technically infeasible or involve excessive cost?</li> </ul>	19
Q.8	<b>Article 4:</b> What activities, which are not already regulated in the UK, if any, do you consider may have a significant adverse impact on soils?	19

Q.9	<b>Article 4:</b> Do you have any comments on the issues we have raised, and on our initial analysis of costs and benefits?	19
Q.10	<b>Article 5:</b> Do you consider there to be significant benefits in having new EC legislation that deals with soil sealing? If so, what are the benefits and do they in your view exceed the potential costs?	23
Q.11	<p><b>Article 5:</b> Do you think there would be value in amending the draft Directive, for example, to:</p> <p>a) make it clear that Member States in considering the need to limit soil sealing should do this as part of their overall consideration of a proposed development's environmental, social and economic impacts;</p> <p>b) provide for exceptions to the requirement to limit sealing, for example, where the proposed development/sealing serves an overriding public interest;</p> <p>c) insert <i>de minimis</i> provisions in line with the thresholds in the Environmental Impact Assessment Directive?</p>	23
Q.12	<b>Article 5:</b> What are your views on amending this provision so that it only requires mitigation of new soil sealing through use of permeable construction materials?	23
Q.13	<b>Article 5:</b> Do you agree with our concerns and our assessment of the costs and benefits as set out in our initial RIA?	23
Q.14	<b>Articles 6-7:</b> Do you consider that this risk-area/programme of measures approach is appropriate? How do you consider that this provision could be improved, for example, what are your views on requiring Member States to put in place programmes of measures to address degradation processes with an adequate focus on higher risk areas and higher risk activities (but without requiring formal identification of risk areas) or requiring more clearly harmonised standards?	28
Q.15	<b>Articles 6-7:</b> Is there a significant benefit, in your view, in having a common EU-wide framework in place?	28
Q.16	<b>Articles 6-7:</b> Do you consider that the correct	28

	degradation processes have been listed for the purpose of identifying risk areas? What are your views on seeking to have compaction removed from this list so that it is dealt with only under the proposed Article 4?	
Q.17	<b>Articles 6-7:</b> Do you consider that the definitions of soil erosion, soil carbon and the other degradation processes are correct considering the range of soil functions which the proposed Directive seeks to protect?	28
Q.18	<b>Articles 6-7:</b> What are your views on the inclusion of salinisation as a threat – do you consider that it should be defined to exclude managed retreat?	28
Q.19	<b>Articles 6-7:</b> If the proposed Directive were to require detailed risk-mapping, is it important for it to require Member States to use all the Annex I factors or could the methodology be left to individual Member States?	28
Q.20	<b>Articles 6-7:</b> Do you agree with our concerns and our estimate of the costs and benefits of this provision?	28
Q.21	<b>Article 8:</b> How important do you think it is for us to be permitted to continue to use existing CAP measures (cross-compliance and agri-environment) to deliver the required Programme of Measures? Do you think such existing measures in their current form are adequate for addressing soils issues in high risk areas?	29
Q.22	<b>Article 8:</b> Would you like the Government to be able to use a range of measures, from guidance and codes of practice to regulations, to implement this proposed Article?	29
Q.23	<b>Article 8:</b> Do you agree with our concerns and our estimate of costs and benefits?	29
Q.24	<b>Article 9:</b> Are there any benefits in having this provision?	31
Q.25	<p><b>Article 9:</b> How do you think this proposed Article could be amended to improve it? Examples include:</p> <ul style="list-style-type: none"> <li>○ So the proposed Directive states that full implementation of existing pollution prevention and waste legislation might be sufficient for implementation.</li> <li>○ So the proposed Directive states specifically what risks or activities must be addressed.</li> </ul>	31

Q.26	<b>Articles 10-11:</b> Do you agree with the costs and benefits identified in our preliminary analysis? How do you think the proposed Directive could be amended to reduce the costs involved whilst achieving the same benefits?	36
Q.27	<b>Articles 10-11:</b> Should the proposed Directive enable Member States to retain their existing national approaches to the identification of contaminated land, provided these deliver some basic common requirements, or should they be required to follow a common detailed procedure? If so, what are the basic common requirements that can in your view reasonably be included in the proposed Directive?	36
Q.28	<b>Articles 10-11:</b> What are your views on the Commission's definition of contaminated sites? Is it appropriate?	37
Q.29	<b>Articles 10-11:</b> What are your views on the list of potentially polluting activities set out in Annex II?	37
Q.30	<b>Articles 10-11:</b> Do you consider that it is necessary to test for dangerous substances at all sites on which potentially polluting activities have taken place or do you think testing should be targeted based on a risk assessment?	37
Q.31	<b>Articles 10-11:</b> Do you think the timescales given in the draft Directive for compiling and reviewing the inventory are reasonable?	37
Q.32	<b>Articles 10-11:</b> How do you think this requirement will affect land values?	37
Q.33	<b>Article 12:</b> How do you think this provision could best be amended to minimise any possible negative impacts that this proposed Article may have in Great Britain?	39
Q.34	<b>Article 12:</b> What are your views on the costs and benefits of this provision? What effect do you think this will have on land prices?	39
Q.35	<b>Article 12:</b> What do you think are the public health/environmental benefits of the requirement to produce Soil Status Reports? Do you consider that they will benefit business activity?	39
Q.36	<b>Articles 13-14:</b> Do you agree that contaminated sites as defined should be remediated? Do you think these	41



	provisions could be amended to make them more proportionate? If so, how?	
Q.37	<b>Articles 13-14:</b> Should this provision be aligned with existing European Directives (as outlined in paragraph 5.2), so that where they apply, those Directives' arrangements concerning remedies will operate as now?	41
Q.38	<b>Articles 13-14:</b> Do you agree with the costs and benefits identified in our preliminary analysis? How do you consider these costs could be reduced whilst achieving the same or similar benefits?	41
Q.39	<b>Articles 13-14:</b> What are your views on requiring Member States to put in place appropriate mechanisms to fund remediation of orphan sites?	41
Q.40	<b>Articles 13-14:</b> What are your views on requiring Member States to have a public 'National Remediation Strategy' in place? Do you think this will affect existing national measures such as remediation by developers?	42
Q.41	<b>Article 15:</b> Do you agree with our concerns and the costs and benefits identified?	44
Q.42	<b>Article 15:</b> What are your views on this provision and how could it be improved?	44
Q.43	<b>Article 16:</b> What are your views on this provision and how could it be improved?	45
Q.44	<b>Article 17:</b> Do you consider that this platform for the exchange of information would be useful for the Government and stakeholders?	45
Q.45	<b>Article 17:</b> Is this too narrow a range of information? If so, what else should be included?	45
Q.46	<b>Articles 18-24:</b> What are your views on these provisions?	48

# **SOIL FRAMEWORK DIRECTIVE**

## **[Initial] Regulatory Impact Assessment**

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# **INITIAL REGULATORY IMPACT ASSESSMENT ON THE EUROPEAN COMMISSION'S PROPOSAL FOR A SOIL FRAMEWORK DIRECTIVE**

## **1. Title**

1. European Commission proposal for an EC Directive “establishing a framework for the protection of soil and amending Directive 2004/35/EC” [COM (2006) 232].

## **2. Summary**

2. On 22<sup>nd</sup> September 2006, the Commission adopted a Thematic Strategy for Soil Protection<sup>1</sup>, which included proposals for a Soil Framework Directive<sup>2</sup>. The proposed Directive primarily seeks to address seven key threats to European soils: erosion; organic matter decline; compaction; salinisation; landslides; contamination; and soil sealing.

3. This followed on from publication in 2002 of the Commission's Communication ‘Towards a Thematic Strategy for the Protection of Soil’<sup>3</sup>, which was supported by Member States including the UK.

4. The proposed Soil Framework Directive introduces requirements on Member States aimed at improving levels of soil protection and soil improvement. These requirements focus on five key areas:

- i. Preventing degradation by incorporating an impact assessment in relation to soils into all sectors of policy and imposing a duty on land –users to prevent or minimise harm to soils.
- ii. Reduction of risks relating to soil erosion, organic matter decline, compaction, salinisation, and landslides. Requirements include identifying risk areas, and deciding on a programme of measures to address these risks;
- iii. Prevention of soil contamination, compilation of an inventory of contaminated sites and remediation of sites listed on the inventory;
- iv. Limiting soil sealing (the covering of the soil surface with an impermeable material such as concrete) or mitigating the effects of sealing;
- v. Awareness raising, reporting to the Commission, and exchanging information.

5. The Commission has provided an Impact Assessment<sup>4</sup> to accompany its proposals. This concentrates on assessing the economic impacts of soil degradation and an examination of possible preventative measures. The Commission estimate the annual total cost of soil degradation to be up to €38 billion for the EU 25.

6. The Impact Assessment makes no quantitative assessment of the benefits of the proposed actions or of many of the costs which those actions themselves would entail. Nor does it include a comparative cost/benefit analysis of the policy options for achieving reductions in the various forms of soil degradation which are examined.

7. The Commission's conclusion that the proposed Soil Framework Directive represents the best approach is based on a perceived need to balance flexibility of implementation at Member State level with a common and systematic process of identifying problems and risks. It is explicitly stated that costs will be incurred before benefits can be realised, and these are likely to be distributed unevenly between Member States.

8. The nature of the Commission's Impact Assessment makes it very difficult to draw conclusions about the specific implications of the proposals for the UK. Moreover, the lack of detailed analysis of alternative policy options by the Commission creates substantial problems for considering what modifications might be deliverable to the proposals as they stand, from a UK perspective.

9. We share the views expressed in the Thematic Strategy about the key role which soil plays in terms of sustainable development and the need to take a multi-operational approach to preserving the functionality of this key ecosystem resource. We are however also aware that our geographical characteristics combined with our demographic situation and industrial history, give us a distinctive set of challenges compared to certain other parts of the EU. They also mean that we do not necessarily share concerns about transboundary effects or competition issues.

10. For the purposes of this RIA, we have carried out a preliminary assessment of the costs and benefits to the UK of the various areas covered by the Directive and the other options in broad terms which are available. Accordingly, the RIA looks at a 'do nothing' option, the Framework Directive as currently proposed, possible amendments to the current proposals, and the alternative of a non-binding approach based on voluntary uptake of the recommendations of the Thematic Strategy.

11. The RIA raises concern in relation to specific provisions of this Directive - in particular the high costs to government and stakeholders of the contamination and soil sealing provisions. The contamination provisions are very prescriptive in nature and the soil sealing provisions have far-reaching implications for the planning system.

12. Considering the existence of EC legislation already that addresses most of these risks, there is also an issue as to whether new legislation will cause confusion and uncertainty with few additional benefits to the environment.

13. The UK believes itself to be ahead of many Member States in addressing soil problems. We already have an extensive range of measures

in place, from cross-compliance and agri-environment measures to measures under the Strategic Environmental Assessment Directive and a legal framework for dealing with contaminated land, which address the threats to the UK's soils, including the threats outlined in the Soil Framework Directive. These measures are described in Annex II. Our preliminary view is that additional EC legislation is most probably not required to enable the UK to take appropriate measures to address risks to its soils.

14. In assessing this legislation, we need to balance the impact of new legislative requirements on our domestic situation where Framework Directive provisions go further than extant legislation in the UK, with the wider environmental benefits at EU level. Account must also be taken of the potential contribution which soils can make in relation to climate change in terms of carbon retention or storage.

15. Our provisional conclusion is that, from a UK point of view, the current proposals risk being overly prescriptive, disproportionate and expensive to implement, and that significant changes in the proposed Directive would be needed to deliver positive net benefits at the national level.

### **3. Purpose and Intended Effect of the Measure**

#### **A. Objectives**

##### **Soil Framework Directive – EU Objective**

16. The overall objective of the Soil Framework Directive is to provide a European framework for action under which Member States will identify threats to soil quality and resources and be required to address any problems arising within their borders. The proposed Directive aims to:

- deliver key elements of the commitment under the 6<sup>th</sup> Environmental Action Programme to produce a Thematic Strategy for soil protection in Europe;
- establish common principles for the protection and sustainable use of soils;
- prevent threats to soils, and mitigate the effects of those threats;
- preserve soil functions within the context of sustainable use;
- restore degraded and contaminated soils to approved levels of functionality.

17. The Commission's principal rationale for Community legislation rests on the need to protect soils from degradation in order to ensure that soils deliver their known ecosystem services and functions. The Commission recognises that aspects of soil protection are addressed in a range of other policies, but believes that there is a need for a more systematic, targeted

approach aimed specifically at soil protection in order to avoid the risk of gaps in coverage. Its specific justifications for Community action include the following:

- Failure to protect soil will undermine sustainability and long term competitiveness in Europe;
- Different national soil protection regimes impose very different obligations on economic operators, thus creating an unbalanced situation in respect of their fixed costs;
- Soil degradation in one Member State can have transboundary consequences. Damage must be addressed at source to prevent costs of restoring environmental quality falling to another Member State;
- European action on preventing/reducing soil contamination will complement strict EU measures and controls already in place to ensure food and feed safety.

18. As drafted, the proposed Framework Directive seeks to meet the objectives set by the Commission, via five main elements.

i) General provisions – Through the development of policies likely to exacerbate or reduce soil degradation processes, Member States are required to identify, describe and assess the impacts that such policies will have on soil degradation processes. Member States are also required to ensure that land users take precautions to prevent or minimise any adverse affects of their actions in cases where they might significantly hamper the soil functions.

(ii) Identification of risk areas and development of a programme of measures – Member States are required to identify areas where there is a risk of soil erosion, organic matter loss, compaction, salinisation and landslides, and establish risk reduction targets and draw up a programme of measures (which should be cost-effective and take into account social and economic impacts) by which these targets can be achieved.

iii) Soil Contamination – Member States are required to: take appropriate action to prevent soil contamination; establish (using a prescriptive identification procedure) an inventory of contaminated sites; require sellers or prospective purchasers of land to supply a soil status report for sites upon which a potentially soil polluting activity is or has taken place; and remediate all sites recorded on the inventory. Member States would be required to set up mechanisms to fund remediation.

iv) Soil sealing – Member States are required to take appropriate measures to limit sealing or where it is carried out, to mitigate the effects of sealing through the use of appropriate construction techniques.

v) Awareness raising, reporting and exchange of information – Member States are required to raise awareness of the importance of soils, and also report back to the Commission on measures taken. The Commission will provide a platform for the exchange of information between Member States.

## **B. UK position**

19. In principle, the UK supports Commission action encouraging Member States to protect their soils. The UK is committed to progressing the 6<sup>th</sup> Environmental Action Plan agenda, and it has previously supported the principle of European action on soils in its response to the Commission's 2002 communication "Towards a Thematic Strategy for Soil Protection". We are keen to see improved protection of European soils and have expressed our support in the past for an EU-wide Soil Thematic Strategy.

20. However, we have concerns regarding the Commission's justification for specific Community legislation on soils, especially given the broad portfolio of existing EC legislation such as the IPPC, Water Framework, SEA, and Environmental Liability Directives, plus CAP, and at the national level, planning legislation and policy frameworks, which already largely address the threats to soils outlined in the proposals. Given the significant contribution such legislation already makes towards protecting and improving soils, we remain to be convinced that there is a need for a Directive in its current form.

21. We are also concerned that Framework Directive includes detailed prescriptive obligations – especially in relation to soil contamination - that are not in keeping with the flexibility that a Framework Directive approach is intended to convey. It is the UK view that any legislative provisions should be proportionate, and comply with principles of subsidiarity and better regulation.

### **2002 Communication 'Towards a Thematic Strategy for the Protection of Soil'**

22. As explained above, the UK supported the Commission's 2002 Communication 'Towards a Thematic Strategy for the Protection of Soil'. However, the 2006 Soil Thematic Strategy differs significantly from the Commission's 2002 Communication. One of the main differences is the legislative proposal for a 'Framework Directive' - a significant departure from the limited 'Soil Monitoring' legislation envisaged in 2002.

### **The Commission's Impact Assessment: UK Views**

23. The Commission's Impact Assessment provides estimates of soil degradation in terms of the extent to which European soils are subject to erosion, compaction, sealing, salinisation, landslides and contamination etc. The costs of this degradation in the EU are estimated at €38 billion (£25.7B) annually, though the Commission recognise that their analysis does not take into account the contribution that existing policies make towards overcoming this.



24. Their Impact Assessment does not provide adequate justification or analysis for a number of the measures and obligations proposed in the Framework Directive. From a preliminary analysis, our key concerns regarding the Commission's Impact Assessment are:

- The rationale given for Community intervention is not convincing. There is a general lack of evidence to support many of the key reasons given for Community legislation, including: the need for, and the extent to which the proposals could deliver a level playing field; and the extent of transboundary effects, and how Community rather than domestic legislation is the best means of addressing this.
- The Commission does not provide a cost-benefit analysis of the various policy options that could be employed in order to reach the objectives of the new Thematic Strategy, and instead opt straight away for legislative proposals without adequate analysis of other possible (non-legislative) options. The principles of better regulation dictate that such policy options should be analysed to ensure that the most appropriate option is identified.
- Many of the quantified costs ignore the benefits that current policies and legislation are delivering and will deliver across Europe now and in the future, and thus take no account of the reduction in soil degradation that such policies achieve. This suggests that the Commission's Impact Assessment not only significantly over-estimates the costs attributed to soil degradation, but in so doing, also over-estimates the benefits that the proposed Directive can deliver;
- Other estimation procedures used by the Commission are also often biased towards an over-estimation of the costs of degradation. For example, some costs are based on data from Member States where the identified problem is a particularly significant issue. When such high-end costs are used to establish an estimated average across Europe (as is the case for figures on erosion and salinisation), a misleading picture of the costs inevitably results.
- It is unclear how many of the costs have been arrived at. For example, estimates regarding the costs of soil degradation associated with soil organic matter loss have been made, but no indication is given as to the extent to which the problem occurs. It is unclear how the cost of organic matter loss can be determined if the scale of loss is unknown.
- Some of the provisions proposed in the Soil Framework Directive do not appear to be covered by the Commission's Impact Assessment. For example, on soil sealing there is no qualitative or quantitative analysis of the impacts of any mitigating measures, nor is there any estimate made of the damage costs associated with sealing.
- The costs of the provisions on contaminated sites appear to have been underestimated.

25. For a more detailed critique of the Commission's Impact Assessment, see Annex III.

### **C. Rationale for Government intervention**

26. The UK considers that there is a rationale for government intervention on soil because:

- a. Without any government intervention, land/site managers are likely to take management decisions based on their business needs, without fully taking into account public goods such as protecting soil carbon and reducing flood risks. They would not therefore, typically protect soils to a socially optimum level. However, some land managers such as farmers do have an interest in, for example, protecting soil structure and preventing erosion, as these factors can directly affect yields.
- b. Evidence suggests that the ecosystem services that soils provide are currently under threat. For example:
  - recent estimates suggest that 2.2m tonnes of topsoil are lost to erosion on arable land in England and Wales per year<sup>5</sup>.
  - in England alone, estimates suggest that 18% of soil organic carbon present in arable topsoil in 1980 had been lost by 1995<sup>6</sup>.
  - significant further loss of soil organic matter is expected due to long-term climate change as a result of global warming, resulting in a decline in soil structure, stability, water holding capacity, nutrient availability etc.
  - Scotland contains well over half the total carbon contained in British soils and it is one of the principal soil attributes that distinguishes Scottish soils from the rest of the United Kingdom. If losses of soil carbon were to be confirmed for Scotland in the same way as they have in England and Wales, then such a loss could be a significant contribution to greenhouse gas emissions.
  - 2002 estimates suggested that in England and Wales alone, over 100,000<sup>7</sup> sites may be affected by contamination, on the basis of what it has been used for. Of these, an estimated 5% to 20%<sup>8</sup> may require action to ensure they do not present unacceptable risk to health or the environment. It should be noted that this estimate (of there being 100,000 such sites) is now considered to be a conservative one.

27. Given these concerns, the UK, like other Member States, is already undertaking a number of actions to protect and improve soils and has made extensive use of existing legislative instruments – many of which are based on European legislation and thus applied across the EU - to help manage many of the threats identified in the Soil Framework Directive (see Annex II for more information). Examples of existing measures include:

- Pollution Prevention and Control Regulations: providing a licensing system for current activities which have the potential to cause pollution, and including clean-up mechanisms for new contamination, and a requirement to leave sites in a “satisfactory state” at the end of authorised activity.
- Water Framework Directive (WFD): including measures to maintain good soil conditions and prevent erosion;
- Environmental Protection Act 1990: Part IIA providing a risk-based approach to the identification and remediation of contaminated land;
- The Town and Country Planning system: providing national planning policy that requires Local Planning Authorities to continue to make effective use of previously developed land, with a national target<sup>9</sup> of at least 60% of new housing to be provided on previously developed land. That takes into account the food and fibre functions of soils and wider soil impacts in EIA and SEA/Sustainability Appraisal requirements, together with risks from contamination by ensuring that development is safe and “suitable for use”;
- CAP - Cross Compliance: All UK farmers in receipt of the Single Farm Payment must meet standards of Good Agricultural and Environmental Condition (GAEC) relating to soil erosion, soil structure and organic matter. All farmers in receipt of the single payment may be subject to a Cross Compliance inspection, including inspections on the soil measures.
- CAP - Agri-environment Schemes: The UK has developed a range of options under agri-environment schemes to encourage farmers to address any threats to soil that demand more specific management than complying with the GAEC standards.

28. Measures such as these are already delivering benefits to the UK, by protecting our soils and contributing to the delivery of related UK priorities, including:

- Sustainable Consumption and Production;
- Protecting the Countryside and Natural Resource Protection;
- Sustainable Farming and Food;
- Climate Change and Energy;
- Sustainable development outcomes at national, regional and local levels through efficient and high quality planning and development management processes;
- Cleaner, safer and greener public spaces.

29. Considering the above, the UK is exploring further what benefits might be delivered through Community legislation, over and above the measures already in place in the UK.

## **4. Consultation**

### **Within Government:**

30. Relevant Defra policy areas have been consulted, as have the Devolved Administrations and relevant delivery bodies. Other Governmental Departments (including DTI, DCLG, DfT, HMT and MoD) have also been consulted. We are also working closely with other interested parties, including the NFU, CBI, the Defra Contaminated Land Forum and Soil Action Plan Advisory Forum.

### **Next Steps**

31. We will continue to consult across government in developing partial and final Regulatory Impact Assessments. We will also liaise closely with industry and other key stakeholders to gather information on how they would expect the current proposals to impact upon them. We aim to launch a wider public consultation in summer 2007 but in the meantime will focus on consulting government and stakeholders (including the Small Business Service) through detailed discussions and workshops, to help us further develop our evidence base.

## **5. Options**

32. Following publication of the draft Soil Framework Directive, the UK must now consider how best to respond to the proposals. At this stage of negotiations, there are three broad options, described below (Options 2-4). There is also a “do nothing” option (Option 1) which provides the baseline for the analysis of Options 2-4.

### **Option 1: The Baseline (Do nothing)**

33. The ‘do nothing’ scenario is included in order to illustrate the *current situation* in the UK as regards soil protection and improvement and provide a base case. Under this scenario, the UK would retain the current, effective soil protection regime, and would make no further commitments in relation to soil protection and improvement.

34. The Commission has already excluded this option by tabling its present proposals. It would therefore only be achievable if the Council of Ministers and the European Parliament were to reject the proposals in their entirety or fail to reach agreement on them. The UK could not unilaterally opt out of any agreed measures.

35. The ‘do nothing’ option is closely mirrored by Option 4. For example, Option 4 would also see the UK retain the current soil protection regime, and would thus not result in any significant costs or benefits over and above those

already incurred under the status quo. However, Option 4 would see the Framework Directive elements of the proposals dropped from the Soil Thematic Strategy package, and result in a non-binding approach to soil protection, based on voluntary uptake of the proposals contained within the Thematic Strategy.

### **Option 2: Strategy plus Directive.**

36. This Option represents acceptance of all elements currently contained within the proposed Framework Directive. Preliminary analysis (see below) suggests that the Framework Directive as proposed would impose huge costs on the UK. This is particularly the case in relation to the provisions on contaminated land, with substantial impacts likely also from the soil sealing provisions which could undermine the economic and social pillars of sustainable development, by putting a very high premium on environmental protection.

### **Option 3: Strategy plus revised Directive.**

37. This would involve negotiation and agreement of changes to make the Directive less prescriptive and more flexible than the published proposals, particularly with regard to the sealing and contamination aspects. Instead, the provisions could focus more closely on matters where prescriptive legislation would result in benefits, such as for the issues of transboundary pollution and protection of soil carbon, without incurring unnecessary costs by moving into domestic matters where subsidiarity should apply, or by setting out in detail how Member States are to arrive at prescribed outcomes. The overall purpose of such revisions would be to ensure that the UK is able to rely as far as possible on its existing soil protection and improvement measures. Where Member States do not already have measures in place, or measures fall well short of what would be expected under a revised Directive (i.e. measures would reflect those already in place in the UK) they could, if necessary, be required to take equivalent measures to protect their soils.

### **Option 4: Strategy Only.**

38. Under this Option, the UK would continue with existing commitments (as described in Option 1) and support the broad objectives outlined in the Thematic Strategy. Instead of the legislative provisions of a Framework Directive, this option would see Member States sign up to a non-binding approach based on voluntary uptake of the recommendations of the Thematic Strategy. The Soil Thematic Strategy aims to enhance soil protection across the EU via the integration of soil protection into national and community policies, closing the knowledge gap in areas of soil protection, and increasing public awareness of the need to protect soils.

## Next Steps

39. We will continue to analyse the options described above and consider other options as appropriate.

## **6. Costs and Benefits**

40. The costs and benefits highlighted in this RIA are at this stage based on preliminary evidence, and as such can only serve to illustrate the possible implications of each of the options assessed. We are in the process of gathering more evidence to ensure that any gaps in our analysis are filled, and that future iterations of the RIA provide a robust evidence base in support of any future policy decisions.

### **Sectors and groups affected:**

41. A number of sectors in the UK would be affected by the obligations in the Soil Framework Directive as currently drafted.

#### ***Positive:***

- General public: If the Framework Directive delivers improvements to the quality and preservation of green space (including urban, greenfield land and rural habitats), and mitigation of certain risks such as flooding, and increased remediation of contaminated sites across the UK. As drafted, some such benefits may emerge, although we expect these to be minimal, as existing soil protection measures in the UK already deliver against the key threats to soils as outlined in the draft Directive.
- Water companies: As drafted, the Framework Directive may result in slight improvements to water quality in some cases. For example, if it increased (even slightly) the remediation of contaminated sites across the UK, some water resources will be subject to fewer contaminants, thus reducing treatment costs for public and other water supplies. Savings made in processing drinking water could be passed on to the public.
- Land managers: There may be some benefits to the UK farming community in terms of competitiveness with EU counterparts, if the Framework Directive delivers a level playing field on soil protection requirements across Europe. At this stage it is unclear how significant such benefits might be<sup>10</sup>.

#### ***Negative:***

- Owners and occupiers: Including individual members of the public, and managers of land, including for agriculture, forestry, nature conservation, major industries and development (for housing, transport infrastructure, etc). As drafted the Framework Directive could have a number of significant negative impacts on this sector. For instance:

- Where owners and occupiers are required to adjust their soil management practices and use of land (for example, where their land falls within an identified risk area), they may be subject to additional administrative or financial burdens;
- Where sites are listed on an inventory of contaminated sites requiring remediation (or are near to such a site), with no remedy having been identified, there is a significant risk of disproportionate (and in some cases unnecessary<sup>11</sup>) property blight<sup>12</sup>. Where Soil Status Reports identify concerns with land, they would be expected to push down the value of the land. In all cases where an Annex II site is to be sold, a Soil Status Report must be made available to any prospective buyer. This would entail a significant administrative (and to a lesser extent financial) cost for all such sellers.
- Owners of all sites where activities listed in Annex II of the Soil Framework Directive are taking place or have taken place in the past: This includes airports, ports, petrol stations, dry cleaners, mining installations, landfill sites, waste water treatment facilities etc. All such sites would be affected by Articles 11-14, and could thus suffer property blight (as above), or be subject to a recurring sampling and remediation regime.
- Property, construction, development and financial services (e.g. banks, insurers) will be directly affected, as will legal and conveyancing services and their advisers, through potential increased administrative burdens and possible re-investigation costs and uncertainties associated with the contamination proposals in particular. Also, property and construction sectors affected by increased costs of construction resulting from measures to mitigate the impacts of sealing, though these increased costs are likely to be passed on to property owners and occupiers.
- The Planning sector: Increased strain (via the sealing provisions for example) on the planning sector, which would have to cope with significantly more planning applications if the Directive is adopted as drafted. This would also affect members of the public, as certain small projects which are currently permitted developments will require planning applications.
- Local Authorities and Agencies such as Environment Agency, SEPA, Natural England, and statutory nature conservation agencies such as CCW: Likely to have responsibility for carrying out and /or enforcing any obligations in a Directive, such as investigation, remediation, strategy work, planning, data collection and reporting. Significant financial and administrative burdens associated with such work.
- General public: Many of the provisions in the current draft would be extremely expensive to implement, and would be funded by the UK taxpayer. The Directive's potential impact on availability of new housing

due to possible increased cost of, and possible loss of development land would also affect the public.

- UK Government and Devolved Administrations: Will be responsible for implementing new legislation or revised legislation – thus significant administrative burdens expected if the Directive is adopted as drafted, which may reduce the resources available for addressing other priorities.

## **Analysis of benefits and costs**

### **UK – INITIAL COST-BENEFIT ANALYSIS**

#### **Option 1: The Baseline (Do Nothing)**

42. The UK already undertakes a wide range of activities designed to protect and restore soils and has made extensive use of existing legislative instruments to help manage the key risks and threats outlined in the Framework Directive proposals. Under the 'do nothing' option, the status quo in the UK would continue, as described below. The policies and legislation in this table are described in more detail at Annex II.

#### **OPTION 1: THE BASELINE**

#### **Benefits & costs of current soil protection and improvement measures in the UK**

##### **Erosion, SOM decline, compaction**

*Estimated **damage costs** in the UK<sup>13</sup> attributed to erosion, SOM decline and compaction:*

- The table below indicates the total costs that various damage activities resulted in, in 2002<sup>14</sup> (figures given are 2006 prices).

Threat	Damage	On-Site Cost	Off-Site Cost	Total
Organic Matter	Flooding		£133 million	
Decline; Compaction	CO <sub>2</sub> Emissions		£85 million	
Erosion	Loss of soil productivity	£9 million		
	Water pollution		£52 million	
	Blocking of water courses		£9 million	
	Reduced fishing		£16 million <sup>15</sup>	
<b>Total</b>		<b>£9 million</b>	<b>£295 million</b>	<b>£305 million</b>

- The impact that existing policies have had on such costs since 2002 is significant however, and suggests that the costs of such damages now are approximately **£218 million per year**<sup>16</sup> (i.e. delivering improvements of some £87m per year. See bullets below on expenditure and net benefits for more details).

*Estimated **expenditure** on measures to address erosion, SOM decline and compaction<sup>17</sup>:*

- Erosion, SOM decline, compaction<sup>18</sup> - **c.£44M** per year, rising to £65M per year from 2009.
  - This expenditure is via Cross Compliance and Environmental Stewardship (including direct and indirect expenditure on soils). Expenditure relating to the soil protection elements of Water Framework Directive, the Hill Farm Allowance, and other schemes (see Annex II) not yet available, but will be included where possible in the Partial RIA.

*Estimated **net benefits**<sup>19</sup>:*



- £43m per year<sup>20</sup> (2006-09), rising to £68m per year from 2009, as take up of Environmental Stewardship reaches its targets.

### **Soil Contamination**

#### **Estimated damage costs in the UK<sup>21</sup> attributed to contamination:**

- Contamination of land can result in negative consequences which may be economically damaging. The costs mostly arise in relation to degradation that has already occurred in the past, and are unlikely to decline unless addressed, while new or future contamination incidents and events should decline as a result of improving standards and greater efforts at prevention, and a move away from the higher-risk industries. Costs arise as follows:
  - Land and property value can be greatly reduced due to its contaminated condition;
  - Large contaminated sites can blight surrounding unaffected property, thus deterring investment and contributing towards urban decay;
  - Land contamination can lead to pollution of the water environment - e.g. aquifers can be rendered unusable - resulting in increased treatment costs for public and other water supplies, or even the abandonment of the resource if it cannot be treated at economic cost.
  - Individual citizens may face costs where for example their homes cannot be sold due to actual or suspected contamination, and concerns about liability or health impacts or resale values.
  - There are also significant costs in investigating and remedying land contamination

#### **UK Expenditure on measures to address contamination:**

- Contamination – c.£1Billion<sup>22</sup> per year.
  - Expenditure on contamination typically occurs in cases where a contaminated site is to be sold/developed. Full site investigation costs £60000 and £95000<sup>23</sup> per 2ha (average) site. Remediation of a contaminated site costs on average £1 million<sup>24</sup> per 2ha (average) site. Annual expenditure on contaminated sites has been estimated at c.£1billion per year<sup>25</sup>. In most cases this expenditure occurs in cases where it is profitable to remediate a site, e.g. for development purposes, so any expenditure on site investigation and remediation is recouped, for example when a site is sold. Remediation is also enforced through Part IIA of the Environmental Protection Act 1990, under which polluters (where they can be found) are required to remediate "unacceptable risk" sites. Further remediation takes place through voluntary action, for example by major companies and public sector organisations such as the MoD.

#### **Delivering net benefits estimated at:**

- Typically, economic benefits derived from expenditure on developing contaminated sites go straight to the developer, and outweigh the costs associated with site investigation and remediation. As such, we do not have accurate figures to show what this is worth. A major driver behind remediation is the post-remediation market value of the completed development, although the development industry on the whole is much more alert to the problems associated with land contamination and thus land condition is considered in many if not most land transactions - especially where site history points up a need to do so. This is reinforced by the knowledge that failure to ensure land is suitable for use may bring enforcement action and reputational damage, and also because conveyancers, lenders, insurers and buyers increasingly demand information and assurance about the condition of land in response to concerns about liability and potential regulatory action under, in particular, Part IIA of the Environmental Protection Act 1990 ("Contaminated Land").

### **Soil Sealing**

#### **Estimated damage costs in the UK attributed to soil sealing:**

- The sealing of soil in urban areas with impermeable materials such as concrete and tarmac increases the amount of rainwater run-off (by as much as 50%<sup>26</sup>) and increases the risks of urban flooding. For example, in 2000, around 40% of the insurance claims made during floods did not appear to relate to fluvial flooding, highlighting the rising incidence of flooding caused by urban drainage problems. This represents claims totalling approximately £400m<sup>27</sup>. We are investigating further the damage costs associated with soil sealing.

Sealing can also result in reduced groundwater recharge, thus affecting water resources and increasing the cost of supply of water. It can also increase water pollution as resulting run-off enters water courses without being filtered by the soil. Sealing can also damage other soil functions, for example, food and fibre cannot be produced, green space is lost etc.

### **UK Expenditure on measures to address soil sealing:**

- As part of the planning system sustainability appraisals are required for emerging strategies and content of RSSs and LDDs and consider the implications for soils. Expenditure on land use planning by local authorities amounts to c.£700 million per annum<sup>28</sup>. Regional planning bodies and statutory consultees also incur costs.
- ODPM research from 2003 reported that planning fees raise 16-18% of the costs of administering them. Where applications require environmental statements costs are typically in tens of thousands, but can be over £100,000. If an average of £70,000 is taken, environmental statements to support planning applications cost over £32 million per annum. For business it is estimated that the planning application fees cost over £200 million per annum. In addition there can be significant costs to applicants of consultant fees and legal fees. Including these direct and indirect costs, application costs for very large applications are likely to range from over £200,000 for strategic waste applications or quarrying applications to over £1 million for large mixed use schemes<sup>29</sup>.

### **Delivering net benefits estimated at:**

- The planning system delivers new development that brings with it significant benefits for business and society in general, including for example helping provide regeneration and place-shaping, generating valued public goods, and providing compatible land uses that can support investment; in 2005 231,653 houses were built with 74% of new dwellings being built on previously developed land;
- There are large differences in values of land for different uses, for example in 2006 the average value of mixed agricultural land in England and Wales (excl London) was £10,023 per hectare compared to £2,600,000 for land for residential use, £779,000 for business class B1 and £660,000 for industrial and warehousing. Developments permitted that are likely to involve some soil sealing can therefore also have significant benefits to landowners.
- We are currently investigating the broader benefits delivered via current and planned (e.g. WFD) policy on soil sealing. Such benefits include:
  - Reduced loss of/harm to soil functions on construction sites;
  - More efficient use of soil resources in the urban environment;
  - Decreased run-off rates, and thus reduced flooding and diffuse pollution;
  - Better design of urban green space, improvements in the urban landscape;
  - Protection of soil functions on greenfield land for the long term benefit of future generations.

## **Option 1: Summary of costs and benefits**

43. This simply describes the current baseline and would not therefore result in any additional costs or benefits to the UK.

## **Option 2: Strategy plus Directive**

44. Preliminary analysis of the draft Framework Directive provisions suggest that in order to implement these fully in the UK, significant costs would be incurred - especially in relation to the contamination and sealing provisions - because of some significant differences from our current regime. The headline costs and benefits of Option 2 are described in the table below, with a detailed breakdown of costs and benefits included in Annex I.

45. It should be noted that the costs and benefits attributed in Option 2 to the various measures outlined by the Commission are at present based on

comparative costs associated with similar measures that are conducted in the UK. As such, the costs attributed to the Framework Directive provisions are indicative rather than definitive. More accurate assessments will be made when we have clarification as to exactly what Member States need to do to meet the requirements of the current draft proposal, and in light of ongoing analysis and forthcoming consultation with stakeholders.

46. In terms of the costs we have been able to roughly quantify so far, the Soil Framework Directive as proposed would result in total discounted costs of between £1.5 billion and £3.7 billion above the baseline. Including ongoing costs and relating to the Commissions initial 25 year timetable, this translates to annualised discounted costs of between £60 million and £150 million per year, for 25 years (see Annex I for breakdown of these figures).

<b>Headline benefits and costs of Option 2 (See Annex I for full breakdown)</b>	
<b>Benefits</b>	<b>Costs</b>
<ul style="list-style-type: none"> <li><b>Articles 8:</b> Potential economic benefit through possible delivery level playing field for UK land managers as those in other Member States are required to meet similar standards - via prescribed mechanisms - to those already in place in the UK.<sup>30</sup></li> </ul>	<ul style="list-style-type: none"> <li><b>Article 11</b> Preliminary identification and sampling of all Annex II sites: <b>c.£1bn - £2bn total</b> (above current baseline).</li> <li><b>Article 11</b> Full risk assessment of potential contaminated sites: <b>c.£250m - £1.5bn total</b> (above current baseline).</li> </ul>

47. We believe, however, that these **provide a conservative estimate of the actual costs of implementing the Directive**. For example, we have not yet been able to provide costings for Articles 4 & 5, which we believe have the potential to be very costly, with potential affects on all development. We also expect there to be significant additional administrative costs in drawing up a programme of measures for the preservation of soil functions (Article 8) and in developing and implementing a National Remediation Strategy (Article 14), the costs for which we have been unable to quantify at this stage. If there are significantly more Annex II sites in the UK than the estimate of 100,000 that this assessment is based on, then the costs associated with Articles 10 and 11 would be considerably higher than those given in this RIA. The potential increases in the costs of the Directive are explored further in the Option 2 table in Annex I.

48. It is possible that the current draft Framework Directive might deliver some benefits to the UK – for example by potentially bringing forward the remediation of some sites, or by introducing minimum requirements for farmers across Europe, to ensure that UK farmers are not adversely affected by having to abide by more stringent soil protection requirements than those in other Member States, as may be the case at present. As described above, work is underway to assess the extent to which such disadvantages – if any – apply.

49. By introducing stricter measures on contamination (as proposed in the current Directive), some minor environmental benefits may also be delivered, whilst the sealing provisions may result in minimal benefits to water recharge and the wider functionality of soil, for example. However, such benefits are

expected to be far outweighed by the costs likely to be incurred in implementing them. Likewise, the introduction of a programme of measures to address organic matter decline may also result in environmental benefits. However, re-sampling work is already planned for 2009, designed to provide information on the trends of soil organic matter loss/accumulation, and inform the development of means to address observed losses, with a view to meeting our already established commitment to halt organic matter decline by 2025.

### **OPTION 3: Strategy plus revised Directive**

50. In Option 3, we have outlined the impacts of a revised Framework Directive that would better reflect the principles of proportionality, subsidiarity and better regulation, and afford Member States more flexibility in meeting Directive requirements. It would include provisions which build on existing national and EU arrangements, and would closely reflect the soil protection and improvement regime already in place in the UK. To achieve this, we would need to seek *significant* amendments to the Directive especially regarding the provisions on soil contamination and soil sealing. It is not yet clear how negotiable any such changes might be.

51. At this stage it is very difficult to say precisely what a revised Framework Directive would look like, which hinders the analysis of costs and benefits of this option, but Annex 1 to this RIA sets out a preliminary assessment. We are in the process of developing our policy critique of the Framework Directive provisions, and until we have done so, suggesting considered alternatives is not possible. However, as a starting point, this analysis considers a Soil Framework Directive amended to address the UK's current key concerns, and which imposes more manageable costs on Member States than those estimated under the current draft proposals, and which focuses on specific areas of particular interest to Member States. Such a revised Soil Framework Directive would therefore:

- Include similar obligations on soil erosion, organic matter decline and compaction, to those tabled in the current draft. However, Member States would be permitted to use existing risk maps and methodologies to deliver Article 6 requirements, and would not be obliged to assess risks that do not relate to their specific geographical situation. For instance, measures on salinisation would not be addressed in the UK's implementation of the Framework Directive measures. Member States would be free to set their own targets within appropriate parameters and utilise existing measures to meet minimum standards closely reflecting those already in place in the UK, and which take account of socio-economic considerations as well as environmental considerations.
- Address contamination, but without imposing such a costly and prescriptive approach on Member States. Member States would be encouraged to utilise risk-based measures (reflecting those already in place in the UK) to achieve minimum standardised targets to identify and remediate contaminated sites where there is a significant risk to human health or the environment.

- Require Member States to consider soil sealing via existing mechanisms such as the SEA and EIA Directives, which impact on domestic planning legislation and guidance (See Annex II for details).
- Include more emphasis on the use of voluntary codes of practice and incentive-based schemes as part of any measures to deliver the objectives of the Framework Directive.
- Include more carefully targeted Article 3 and Article 4 requirements, which would be addressed through existing legislation such as the SEA and EIA Directives, and only include prescriptive community wide provisions in cases where such measures are appropriate, for example in addressing transboundary pollution of soil.

52. Option 3 should deliver similar (though perhaps slightly reduced) minimal benefits as under Option 2, such as requiring other Member States to implement soil protection and improvement measures equivalent to those already in place in the UK, thus potentially increasing the competitiveness of UK land managers across Europe. Such benefits would be delivered at a considerably smaller cost to the taxpayer than would be the case under Option 2. The headline costs and benefits of Option 3 are described in the table below, with a detailed breakdown of costs and benefits included in Annex I.

<b>Headline costs and benefits of Option 3 (See Annex I for full breakdown)</b>	
<b>Benefits<sup>31</sup></b>	<b>Costs<sup>32</sup></b>
<ul style="list-style-type: none"> <li>• <b>Articles 6 – 8:</b> Potential economic benefit through possible delivery level playing field for UK land managers as those in other Member States are required to meet same standards as those already in place in the UK.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Article 6</b> identification of risk areas reduced to c.<b>£150k</b> (plus additional costs for Scotland and Northern Ireland) - a small amount compared with costs of Option 2.</li> <li>• <b>Article 15</b> awareness raising costs c.<b>£2m</b> initially, with ongoing costs of c.<b>£500k</b> per year.</li> </ul>

53. In seeking revisions to the present proposals we would aim for a Framework Directive that complements existing UK soil protection and improvement measures, and can be delivered largely via existing mechanisms, without incurring the substantial costs that the provisions currently tabled by the Commission are likely to result in.

54. The precise impacts of Option 3 are difficult to quantify, as at this early stage of negotiations it is not possible to say exactly what a Soil Framework Directive should look like in order to ensure maximum benefits to the UK. However, we do believe that a revised Directive would deliver environmental benefits to soils as a result of the potentially increased emphasis on the importance of soil protection in policy making, and potentially delivering something approaching a level playing field for land managers across Europe via minimum (but not equivalent) standards relating to agricultural soils, as well as possible additional benefits relating to the sharing of information and knowledge. Our preliminary assessment of Option 3 suggests that this would result in total discounted costs of £10 million - £11 million above the baseline.

## **OPTION 4: Strategy only**

55. Under the adopted Soil Thematic Strategy, soil protection would be enhanced across the EU via three key mechanisms (excluding the Soil Framework Directive):

1. Integration of soil protection in to the formulation and implementation of national and community policies;
2. Closing the current recognised knowledge gap in certain areas of soil protection through research supported by Community and national research programmes;
3. Increasing public awareness of the need to protect soil.

56. There are already mechanisms in place in the UK that adhere to these pillars of the Soil Thematic Strategy, as detailed at Annex II. The costs and benefits associated with Option 4 in the UK will mirror the 'do nothing' (Option 1) approach described in the baseline, and we have not therefore set these out again here. There are some advantages over Option 1 however, which may be delivered through increased understanding of soils via the Strategy's emphasis on collaborative research and awareness raising and more pressure on other Member States to improve levels of soil protection (albeit voluntarily) which may result in other Member States implementing soil protection and improvement measures more closely resembling those in place in the UK, and thus may help UK land managers to compete with their European counterparts<sup>33</sup>. The headline advantages and disadvantages of Option 4 are described in the table below, with a more detailed included in Annex I.

<b>Headline advantages and disadvantages<sup>34</sup> (See Annex I for full breakdown)</b>	
<b>Advantages</b>	<b>Disadvantages</b>
<ul style="list-style-type: none"> <li>• No additional costs to UK government, as no expensive Framework Directive provisions to implement.</li> <li>• No effect on land management or development (etc) industries, as no new provisions to address.</li> <li>• Benefits through collaborative research, knowledge sharing and pressure on other Member States to raise their standards of soils protection.</li> </ul>	<ul style="list-style-type: none"> <li>• Risk that other MSs will not address problems. UK agricultural sector may be at a competitive disadvantage with other MSs where soil protection measures are weaker.</li> </ul>

57. Option 4 would result in minimal or no additional costs, and some possible, though minor advantages on top of what we are already doing in the UK. It would thus be significantly cheaper than Option 2, which (based on the rough comparative figures we have available at present) initial estimates suggest could impose additional costs in the UK of £60 million and £150 million per year for 25 years. This is however a more difficult outcome to achieve considering that a Directive has been proposed by the Commission.



## **Summary of costs and benefits of Options 2, 3 & 4:**

58. If the Directive is adopted in its current form, preliminary analysis suggests that UK government and industry would incur significant **additional** costs, especially with regard to the contamination aspects of the package. Based on the quantitative analysis *we have been able to conduct so far*, Options 3 and 4 provide best value for money.

Option	Benefits of Option	Costs <sup>35</sup> of Option	Net Benefit (Benefit - Cost)
1	n/a	n/a	n/a
2	£minimal	£1.5 billion to £3.7 billion	- £1.5 billion to -£3.7 billion
3	£minimal	£10 million to £11 million <sup>36</sup>	- £10 million to -£11 million
4	£minimal	£minimal	£0

59. Work is underway to further clarify the costs and benefits to the UK of the proposed Soil Framework Directive, and of the provisions we might see in a revised Framework Directive. Our findings will be assessed in future iterations of the RIA. Full details of all the costs and benefits assessed in this Regulatory Impact Assessment are included in the tables at Annex I.

## **7. Small Firms Impacts Test**

60. Many of the businesses likely to be affected by the Directive will be small businesses – including farmers, the property and construction sectors, dry cleaners and petrol stations. Examples of how small businesses would be affected by the proposals are as follows:

- Property sector likely to be affected by requirement to conduct Soil Status Reports on all sites being sold, upon which potentially polluting activities (as listed in Annex II of the Directive) have taken place. Millions of transactions likely across EU25 (with UK likely to require higher than average number of Soil Status Reports), imposing significant administrative and economic costs on all property transactions.
- Construction sector due to increased construction costs. The materials and construction techniques required to mitigate the effects of soil sealing are likely to be more costly than standard techniques.
- Farmers running IPPC sized pig or poultry units (750 sows/2,000 finishing pigs; or 40,000 poultry places). As a result of the provisions on contaminated land, soils on these farms may have to be sampled even though it is expected that generally there will not be a significant risk of harm to human health or the environment.
- The soil sealing provisions in the Directive also have the potential to significantly affect small business (farmers for example) by adding to their administrative costs, particularly if at present they rely on Permitted Development Rights for developing their property.

61. We are in the process of conducting a more in depth Small Firms Impact Test. The Small Business Service will be consulted over the coming weeks, in advance of a preliminary public consultation, which will be launched in July. The results of the Small Firms Impact Test will be included in the Partial RIA, which will accompany the preliminary consultation.

## **8. Competition Assessment**

62. We will undertake further examination of the impacts on small businesses and competitiveness throughout the development of this Regulatory Impact Assessment.

## **9. Enforcement, Sanctions and Monitoring**

63. If the Framework Directive is adopted as currently proposed, then the UK would be required to implement a number of new legislative measures to ensure that all provisions are met. These measures would be accompanied by appropriate enforcement and monitoring regimes.

64. According to Article 22, Member States will be expected to ‘lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to’ the Directive, and should take appropriate steps to ensure that they are implemented. The adoption of any sanctions for non-compliance are required to be effective, proportionate and dissuasive, but the costs can only be determined once the UK has determined how the Framework Directive provisions would be implemented.

65. A monitoring system will need to be established to allow Member States to make an “assessment of the efficiency of the measures to reduce the risk and occurrence of soil degradation processes”, as required by the Directive. Member States are required to bring any laws, regulations and administrative provisions necessary to comply with the Directive into force within two years of the Directive having come into force.

## **10. Summary and Recommendations**

66. Overall, the Commission’s aims of ensuring soil is treated throughout the EU as a vital natural resource, and of seeking to prevent its degradation, fit well with the UK’s commitment to natural resource protection and our existing soils policy framework.

67. Under the Framework Directive as drafted, the duty on Member States to assess and respond to key threats to soil (erosion, compaction, soil organic matter decline etc) in their territory suggests that the emerging package could potentially deliver some benefits to the UK, i.e. through the introduction of minimum but not equivalent standards throughout the EU. The Commission’s Impact Assessment does not however give much assistance in terms of the detailed costs and benefits to the EU as a whole, nor does it assist in assessing



the costs and benefits to the UK either directly or through raising the standards of other countries.

68. Our preliminary assessment of costs and benefits to the UK has led to significant concerns regarding various aspects of the Directive, in particular the contaminated land and soil sealing provisions. In these areas we are concerned that the benefits that may result from the current set of proposals would be far outweighed by the high costs and administrative burdens that would be imposed. Our particular geographical circumstances with a low risk of transboundary effects, a high population and a long industrial history have some bearing on this assessment.

69. Furthermore, in view of the existing wide range of European and domestic legislation which addresses the key threats that the Commission's proposals focus on, there are clear risks that a further Directive may cause confusion and excessive complexity with limited benefit to the environment.

70. The UK currently has a range of voluntary and incentive-based measures (from Codes of Good Agricultural Practise and cross-compliance to planning led remediation of contaminated land) in place, some of which go beyond existing EC legislation. Community legislation is not therefore obviously required to enable the UK to achieve the environmental outcomes it seeks, and new legislation may undermine existing measures. Table 1 in Annex II highlights the different provisions that already address soil protection and improvement.

71. Based on this preliminary analysis, Options 3 and 4 appear to be the most appropriate options against which our response to the Commission's proposals should be framed. It should be noted that our preliminary assessment of the costs of implementing the Directive as drafted (described under Option 2) is considered to be conservative. Many of the costs associated with the provisions of the draft Directive have not been quantified at this stage. We expect some of these to be significant.

72. We are currently gathering more evidence on the costs associated with the Soil Framework Directive measures as currently drafted. We are also considering in more detail what changes might be made to the Directive to deliver proportionate provisions that focus on key risks to UK and European soils and which deal with matters that are not or cannot be dealt with on a national level. A more detailed analysis of the options available and their costs and benefits will be presented in the next iteration of this Regulatory Impact Assessment.

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<sup>1</sup> COM(2006)231 final - [http://ec.europa.eu/environment/soil/pdf/com\\_2006\\_0231\\_en.pdf](http://ec.europa.eu/environment/soil/pdf/com_2006_0231_en.pdf)

<sup>2</sup> COM (2006)232 final - [http://ec.europa.eu/environment/soil/pdf/com\\_2006\\_0232\\_en.pdf](http://ec.europa.eu/environment/soil/pdf/com_2006_0232_en.pdf)

<sup>3</sup> COM(2002)179 - [http://eur-lex.europa.eu/LexUriServ/site/en/com/2002/com2002\\_0179en01.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/com/2002/com2002_0179en01.pdf)

<sup>4</sup> SEC (2006)620 - [http://ec.europa.eu/environment/soil/pdf/sec\\_2006\\_620\\_en.pdf](http://ec.europa.eu/environment/soil/pdf/sec_2006_620_en.pdf)

<sup>5</sup> The Environment Agency – ‘State of Soils in England and Wales’ Report ([http://www.environment-agency.gov.uk/commondata/acrobat/stateofsoils\\_775492.pdf](http://www.environment-agency.gov.uk/commondata/acrobat/stateofsoils_775492.pdf)).

<sup>6</sup> Defra – ‘The First Soil Action Plan for England: 2004-2006’. (PB 9441).

<sup>7</sup> Environment Agency 2002 – ‘Dealing with Contaminated Land In England’ Report.

<sup>8</sup> Environment Agency 2002 – ‘Dealing with Contaminated Land In England’ Report.

<sup>9</sup> England only.

<sup>10</sup> We will assess any possible short and long-term benefits of this in the next iteration of the RIA.

<sup>11</sup> For example, in cases where a site appearing on the inventory has been remediated, but the inventory has not been updated to reflect this.

<sup>12</sup> Preliminary analysis suggests that land/property value would be significantly affected when it appears on an inventory of contaminated sites, where no remedy has been identified. Buyers may respond to the contaminated status of a site in a risk adverse manner, resulting in a disproportionately negative affect on the value of a site.

<sup>13</sup> Note that these will decrease as existing measures increasingly take effect, and planned future measures are implemented (i.e. under the Water Framework Directive).

<sup>14</sup> Environment Agency 2002 - ‘Agriculture and Natural Resources: Benefits, Costs and Potential Solutions’.

<sup>15</sup> England and Wales only.

<sup>16</sup> Defra: Since 2002 when the damage costs of agriculture-related soil degradation were estimated, Cross-compliance and Agri-environment schemes have been introduced which have increased soil protection. As part of an initial analysis, Defra economists have estimated that these have reduced damage costs incurred each year from £305 million to £218 million; a saving of £87 million per year. This figure is only indicative however, and awaits a full evaluation of the environmental benefits of these schemes in the near future.

<sup>17</sup> Note that this expenditure relates to cross-compliance (UK-wide) and agri-environment schemes for England and Wales. Expenditure for the whole of the UK would be higher.

<sup>18</sup> But not including Landslides and Salinisation. At present we do not have UK data on landslides, but are in the process of pulling this together. Salinisation is not considered to be a threat in the UK at present, so any expenditure to address this would be minimal.

<sup>19</sup> Note that these net benefits relate to cross-compliance (UK-wide) and agri-environment schemes for England and Wales. Net benefits for the whole of the UK would be higher.

<sup>20</sup> This is a rough estimate of annual benefits delivered via Cross Compliance and Agri-environment schemes. Short-term net benefits are roughly £87m minus £44m (expenditure),

equalling £43m p/a. Long-term benefits are roughly £133m, minus £65m (expenditure) equalling £68m p/a. Benefits that will be delivered through WFD implementation not yet known.

<sup>21</sup> Note that these will decrease as existing measures increasingly take effect.

<sup>22</sup> "UK Contaminated Land Treatment Market Research Report 2005", by MBD Ltd. For more information, see: <http://www.researchandmarkets.com/reports/7616/> and <http://www.mbdLtd.co.uk/Press-Release/Contaminated-Land.htm>

<sup>23</sup> Figure arrived at via three investigative stages: 1) Collation and review of documentary information: £5K - £10K; 2) Visual inspection and limited sampling: £5K - £10K; 3) Intrusive investigation: £50K - £75K.

<sup>24</sup> Based on Defra contaminated land capital programme information.

<sup>25</sup> "UK Contaminated Land Treatment Market Research Report 2005", by MBD Ltd. For more information, see: <http://www.researchandmarkets.com/reports/7616/>

<sup>26</sup> RHS (2005) Gardening matters: Front gardens.

<sup>27</sup> Defra (2005) Making space for water: Taking forward a new Government strategy for flood and coastal erosion risk management in England, First Government response to the Autumn 2004 consultation exercise: Updated Regulatory Impact Assessment.

<sup>28</sup> From the Barker Review of Land Use Planning.

<sup>29</sup> All figures in this bullet point from the Barker Review of Land Use Planning.

<sup>30</sup> We need to explore the extent to which this is the case. For the next iteration of the RIA, we will investigate the level of soil protection present in extant regimes across Europe, to make an assessment of how significant a disadvantage, if at all, it is to UK's ability to compete across Europe.

<sup>31</sup> Option 3 should deliver similar benefits to Option 2, in terms of a level playing field for all across Europe, though would likely result in a slightly lower level of environmental protection and improvement than option 2.

<sup>32</sup> All of the headline costs listed under Option 3 would also arise under Option 2.

<sup>33</sup> As described at note 27, we need to explore the extent to which this is the case. For the next iteration of the RIA, we will investigate the level of soil protection present in extant regimes across Europe, to make an assessment of how significant a disadvantage, if at all, it is to UK's ability to compete across Europe.

<sup>34</sup> Under option 4, there are no additional costs and benefits over and above what is delivered under the current regime, as described in Option 1. However, there are a number of advantages and disadvantages associated with this approach. Hence, this table describes advantages and disadvantages, rather than costs and benefits.

<sup>35</sup> Based on the costs we have been able to quantify thus far. Costs are expanded upon in tables in Annex I – but note that many of these have not been quantified as yet.

<sup>36</sup> Discounted costs, resulting from £2m short run cost, plus additional £0.5m p/a for 25 years.

## Analysis of Costs and Benefits

### OPTION 2: Strategy plus Directive as currently drafted

It should be noted that the costs attributed to the various requirements under the current draft Framework Directive are based on comparisons to similar work already undertaken in the UK, and are not precise estimates based on assessments of the specific Framework Directive obligations. More accurate assessments will be made in light of ongoing analysis and forthcoming consultation with stakeholders, and when we receive clarification from the Commission regarding exactly what they expect Member States to do to meet the requirements of the current draft proposal.

Benefits	Costs
<p><b><u>General Provisions</u></b> (Articles 1-4)</p> <p>Article 4: Requires Member States to ensure that any land user whose actions affect the soil in a way that can reasonably be expected to hamper significantly the soil functions referred to in Article 1(1) is obliged to take precautions to prevent or minimise such adverse effects.</p> <ul style="list-style-type: none"> <li>Article 4 could bring some benefits over and above the “baseline” of what UK legislation and policy already achieves. However, <b>it is very difficult to quantify possible benefits</b>, because the terminology of Article 4 is vague. <ul style="list-style-type: none"> <li>Benefits could vary very widely depending on how the terms (i) “significant” hampering of soil functions; and (ii) ‘an acceptable level of precaution to prevent or minimise adverse effects’ are interpreted.</li> </ul> </li> </ul>	<p><b><u>General Provisions</u></b> (Articles 1-4)</p> <ul style="list-style-type: none"> <li>Though not a substantive provision, Article 1 indicates that in implementing all the requirements of the Framework Directive, Member States should seek to prevent “soil degradation processes, both occurring naturally and caused by a wide range of human activities”. Costs assessed in this preliminary analysis do not cover the implications of having to prevent purely natural degradation from taking place<sup>1</sup>. Addressing such degradation processes would add further to the costs outlined in this paper.</li> <li>The vagueness of Article 4 (as described in the “benefits” box opposite) also means that <b>costs are impossible to quantify. As a very rough estimate, costs to the taxpayer and UK businesses could range from say some £millions above the baseline to some hundreds of £millions per year</b> – depending on how Article 4 is interpreted (which is currently unclear).</li> <li>Article 4 refers to “land users” rather than “landowners or land managers”. It therefore potentially applies to large swathes of the UK population, including gardeners and people who use land for recreation, and is thus likely to require complex legislation and enforcement measures. This adds to the potential costs of this provision.</li> </ul>
<p><b><u>Soil Sealing</u></b> (Article 5)</p> <p>Potential benefits are as follows, though require more in depth consideration to ascertain the extent to which these benefits will be realised on top of what is delivered through existing soil sealing policy:</p> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>Stricter rules on sealing suggest that slight environmental benefits might result from sealing</li> </ul>	<p><b><u>Soil Sealing</u></b> (Article 5)</p> <p>Figures relating to the costs resulting from the proposed sealing provisions are not yet available. We hope to include these in future iteration of the RIA. Likely costs are as follows, though require more in depth consideration to ascertain the extent to which these will impose additional costs on top of those incurred at present in the UK:</p>

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<p>provisions, through their contribution to the protection of particular soil functions. For example:</p> <ul style="list-style-type: none"> <li>○ If certain developments currently allowed as permitted development rights - for example members of public wishing to pave drives/gardens - require planning applications, the occurrence of sealing associated with this activity might be reduced, thus decreasing run-off rates and reducing flooding. However, it is important to note that permitted development rights can be altered without the need for this Article.</li> </ul>	<p><b>Economic</b></p> <ul style="list-style-type: none"> <li>• Increased construction costs: The materials and construction techniques required to mitigate the effects of soil sealing are likely to be more costly than standard techniques.</li> <li>• More planning applications required (e.g. if Article interferes with Permitted Development Rights, as appears to be the case under the current draft): Planning applications can be costly in terms of the time and resources required to make them, and the planning fees incurred on them. As drafted the Directive will increase the number of proposals which require the submission of a planning application for appraisal. Increased need for planning permission would also put a greater strain on the rest of the planning system.</li> </ul> <p><b>Social</b></p> <ul style="list-style-type: none"> <li>• Loss of development land: Land for development is a scarce resource. Where soil sealing controls mean that land can no longer be developed the stock is further reduced, with potentially significant cost implications.</li> <li>• Loss of development: If construction costs are significantly increased, and thus become too high, or if insufficient land is available development may not be able to go ahead.</li> <li>• Inefficient use of land: If the Article restricts the type of development that occurs on a particular site, then the most efficient use may not be allowed.</li> </ul>
<p><b><u>Risk prevention, mitigation and restoration:</u></b> (Articles 6-8)</p> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Article 6 requires a complete assessment of risk areas, allowing for potentially improved targeting of soil protection measures.</li> <li>• Article 8 may result in potentially improved levels of soil protection across the UK, e.g. farmers not in receipt of Single Farm Payment (and thus not obliged to follow Cross Compliance best practice) would be required to comply with soil protection requirements resulting from the Framework Directive Programme of Measures, and farmers may have to comply with stricter and more far-reaching standards.</li> </ul> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>• Possible efficiency gains through improved</li> </ul>	<p><b><u>Risk prevention, mitigation and restoration:</u></b> (Articles 6-8)</p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>• Article 6: Base data is available for identification of broadly defined areas at risk from soil erosion, organic matter decline and compaction. Additional &lt;£150K (England &amp; Wales only) estimated to identify risk areas based on this data. Further expenditure would be required to complete the exercise for Scotland and Northern Ireland. Note also that Article 18 of the draft Directive allows the Commission to alter the criteria which Member States are required to use in identifying risk areas – this may result in additional costs. Costs may also be affected by the scale at which Member States are required to identify risk areas.</li> <li>• A further c.£500k required if re-sampling of SOM is required (unclear at present if current UK data on</li> </ul>

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<p>information on risk areas allowing for more targeted action to deal with identified soil threats.</p> <ul style="list-style-type: none"> <li>• Could deliver a level playing field – UK farmers better able to compete with other MS who have to increase levels of soil protection to comply with the Framework Directive. We are exploring this issue further, with the assistance of economist colleagues, to determine the extent to which this could benefit the UK.</li> <li>• Requirement to identify areas at risk of organic matter loss (and implement a programme of measures to respond to this) may deliver slight environmental benefits, as preliminary studies in the UK show that this is an issue that needs to be addressed further.</li> </ul>	<p>SOM is compatible with requirement under Article 6.1(b)).</p> <ul style="list-style-type: none"> <li>• Full implementation of Article 6 also requires identification of areas at risk of landslides and salinisation. Base data is not readily available, and would thus result in further costs across the UK.</li> <li>• Additional administrative burden on UK Government in drawing up the 'programme of measures' (Article 8). Such a programme of measures in relation to salinisation in the UK would result in no benefits whatsoever, as salinisation is simply not a threat in the UK.</li> <li>• Establishing targets as part of Programme of Measures implies need for future monitoring against these targets, resulting in further costs.</li> <li>• Potentially significant implementation costs, as current soil protection mechanisms may need to be reshaped to meet more closely the SFD requirements.</li> <li>• Potential additional administrative burdens and compliance costs for land managers (in particular small businesses), in adjusting to changes made to existing soil protection measures.</li> </ul>
<p><b><u>Soil contamination:</u></b> (Articles 9-14)</p> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>• Potentially improved mitigation/remediation in cases where cross-border contamination occurs (i.e. Northern Ireland/Eire).</li> </ul> <p><b>Environmental/Social</b></p> <ul style="list-style-type: none"> <li>• Potentially increased (and quicker) remediation of sites in UK – thus risks to environment and human health potentially lowered (more quickly), though current regime already addresses contamination where risks are significant. Any benefits would therefore only be slight.</li> </ul>	<p><b><u>Soil contamination:</u></b> (Articles 9-14)</p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>• <u>Inventory of contaminated sites:</u> (Arts 10 &amp; 11) <ul style="list-style-type: none"> <li>◦ Admin burdens imposed via official identification and listing of every site ever used for an Annex II activity. For a cost comparison, inspection work by LAs was estimated in 1998 to cost some <b>£12m pa<sup>2</sup></b>;</li> <li>◦ Cost of mandatory sampling of every "Annex II" site, to establish concentration levels of dangerous substances. The Commission estimate that in England alone 100,000<sup>3</sup> sites would require such preliminary sampling (this assumes that all 100,000 sites fall within Annex II, which may not be the case). Based on a sampling and analysis cost averaging £10k-£20k for a 2 ha (average size) site, the estimated total cost of this is <b>£1bn to £2bn<sup>4</sup></b>. It should be noted however, that this estimate of 100,000 sites is out of date, and is considered to be conservative. For example, 24% of the UK falls within the scope of Annex II, bullet 5, 'former military sites' – one of <i>eleven</i> different types of site where mandatory sampling would</li> </ul> </li> </ul>

	<p>be required. This suggests that the number of sites upon which potentially polluting activities have or are taking place will be well in excess of the 100,000 cited in the Commission's Impact Assessment. If, as expected, there are significantly more sites falling within the scope of the contamination provisions, then we would expect to incur significantly higher costs. <i>For example:</i></p> <ul style="list-style-type: none"> <li>○ For 200,000 sites, costs would equate to £2bn to £4bn.</li> <li>○ For 300,000 sites, costs would equate to £3bn to £6bn<sup>5</sup>.</li> </ul> <p>○ Where the level of contamination ascertained by the preliminary sampling of Annex II sites suggests a possible significant risk to human health or the environment, a full site investigation and site-specific risk assessment will be required. In the UK, this work costs on average £50K - £75K per site (average 2ha). If 5-20% of identified Annex II sites require this further investigation, total costs in excess of <b>£250m - £1.5bn</b> could arise (based on the 100,000 sites assumption). If there are significantly more than 100,000 such sites meeting Annex II descriptions, potential costs would be as follows:</p> <ul style="list-style-type: none"> <li>○ For 200,000 sites, total costs would equate to £500m - £3bn.</li> <li>○ For 300,000 sites, total costs would be equated to £750m - £4.5bn<sup>6</sup>.</li> </ul> <p>○ The strict timetable for the inventory may add to costs. Conducting appropriate sampling and risk assessments is a highly skilled, complicated job. As drafted, the proposals would require a much higher volume of assessment, and could present capacity problems.</p> <p>○ Requirement to review inventory of contaminated sites also likely to incur very significant costs (though these are not analysed in the Commission's Impact Assessment). Costs of reviewing the inventory for the first time could be similar to those associated with site investigations as described in the three bullet points above. Total costs for reviewing the inventory are dependent on the number of sites recorded on the first iteration of the inventory.</p> <p>○ Article 18 allows the Commission to lay down a</p>
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	<p>harmonised methodology for conducting risk assessments. This may lead to further costs if Member States are forced to re-assess sites using a prescribed methodology.</p> <ul style="list-style-type: none"> <li>○ Administrative and financial burden of establishing identification procedure for contaminated sites falls to a designated competent authority.</li> <li>• <u>Soil Status Reports (SSRs):</u> (Art. 12)             <ul style="list-style-type: none"> <li>○ Millions of transactions likely across EU25 (with UK likely to require higher than average number of SSRs), imposing significant administrative and economic costs on all property transactions.</li> <li>○ Potential for land and property blight. Whilst it is not yet fully clear how property markets will react, in cases where SSRs identify concerns with the land, this would be expected to push down the value of the land. This effect is also possible through the ongoing nature of the obligation, even where the site presents no concerns.</li> <li>○ Additional processing costs associated with providing SSR information. A relevant comparator is the provision of existing water information by water companies to inform property transactions. The supply of this already existing information had an estimated market value in 2004 of <b>£34m</b>, based on an average cost of £42 per search. Furthermore, SSR requirements are more extensive, e.g. requiring sampling at the property.</li> <li>○ UK businesses, including major industry and property sectors likely to incur administrative and financial costs to meet SSR requirements.</li> <li>○ Commission Impact Assessment does not take account of the potentially significant additional costs associated with establishing monitoring and enforcement regimes to ensure SSR provisions are met.</li> </ul> </li> <li>• <u>Remediation:</u> (Arts. 13 &amp; 14)             <ul style="list-style-type: none"> <li>○ Member States will have a duty to remediate all sites which pose a significant risk to human health or the environment. Estimates suggest that this applies to 5%-20% of potentially contaminated sites (see Annex II of the Directive). In the UK we expect that the property development market will remediate much of this, <i>where there is value in so doing</i></li> </ul> </li> </ul>
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	<p>(i.e. through re-sale value of the remediated site). In cases where the risk is significant, but unlikely to be voluntarily remediated, Part IIA is designed to ensure that such risks are mitigated. Despite this however, we do expect some additional costs to arise through the proposed remediation provisions. For example:</p> <ul style="list-style-type: none"> <li>○ Given the timetable required under Article 14 of the proposed regimes, it is anticipated that the Commission proposals may lead to remediation of some sites at a cost to the public sector where these would otherwise have been voluntarily remediated, as the timetable may deter developers from spending large amounts of money on remediation where this is due to be done by the Government.</li> <li>○ The timetable for remediation may also drive up costs by raising demand for expert assessments of sites, with insufficient capacity to carry this out.</li> <li>○ The Directive requires remediation of all sites appearing in inventories, and does not provide for the balance of costs and benefits, practicability, or possible adverse environmental impacts, to be taken into account. This would add to costs in appropriate cases - e.g. where the costs of remediation are disproportionate - compared to the current UK approach under which such factors can be considered.</li> <li>○ Additional administrative burden on UK Government in drawing up the 'National Remediation Strategy' (Article 14).</li> <li>○ Potential for small businesses (e.g. IPPC sized pig and poultry units; dry cleaners etc.) to get caught up in an ongoing cycle of remediation, likely to put them out of business.</li> </ul>
<p><b><u>Awareness raising, reporting and exchange of information:</u></b> (Articles 15-26)</p> <ul style="list-style-type: none"> <li>• Potential efficiency savings via improved cross-border administration of soil protection/monitoring etc, i.e. Northern Ireland/Republic of Ireland.</li> <li>• Potential minor environmental and efficiency benefits through the Commission providing a platform for exchange of information.</li> </ul>	<p><b><u>Awareness raising, reporting and exchange of information:</u></b> (Articles 15-26)</p> <ul style="list-style-type: none"> <li>• Costs of awareness raising (Art 15) not analysed in the Commission's Impact Assessment. However, experience of running awareness raising campaigns suggests set up costs of <b>£2M</b>, with ongoing costs of <b>£0.5M p/a</b>.</li> <li>• Majority of implementation costs fall upon Member States. Costs of implementing contamination and</li> </ul>

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	<p>sealing aspects of the Directive likely to be very high.</p> <ul style="list-style-type: none"> <li>Some scientifically interesting sites have developed as a result of contamination present on the site, and have thus been designated as SSSIs as a result of the presence of contamination. The remediation of such sites, as may be required under Article 13, could thus damage UK compliance with the Habitats Directive.</li> </ul>
<b>TOTAL BENEFITS: Minimal</b>	<b>TOTAL COSTS: in excess of £1.5bn - £3.7bn<sup>7</sup></b>

### OPTION 3: Strategy plus revised Directive

See paragraph 44 of the Initial RIA for an overview of a revised Directive

At this stage in the development of a detailed policy line on the proposed Soil Framework Directive, it is very difficult to outline in any detail what shape a revised Directive might take. It is thus not possible to attribute accurately any costs and benefits to Option 3 at this stage. True costs and benefits can only be assessed when we have a clearer line on how we would want to see the Directive revised. We will be better able to provide such costs in the Partial RIA, and following public consultation.

Benefits	Costs
<p><b><u>General Provisions</u></b> (Articles 1-4)</p> <ul style="list-style-type: none"> <li>Possible environmental benefits if existing SEA and EIA legislation is amended to better account for damage to soils.</li> </ul>	<p><b><u>General Provisions</u></b> (Articles 1-4)</p> <ul style="list-style-type: none"> <li>Arts 3 &amp; 4 amended so requirements are largely addressed by the SEA and EIA Directives. Possible minimal costs associated with amending existing legislation to better account for damage to soils, and for planners/members of the public in requirement to address soils issues more fully.</li> </ul>
<p><b><u>Soil Sealing:</u></b> (Article 5)</p> <ul style="list-style-type: none"> <li>Minor benefits possible from increasing emphasis on preventing or mitigating soil sealing in existing measures. For example, by embedding sealing issues more firmly in SEA and EIA requirements, minor benefits may be derived on top of what the current system delivers (though require more in depth consideration to ascertain the extent to which these might be realised):</li> </ul>	<p><b><u>Soil Sealing:</u></b> (Article 5)</p> <p>Under a revised Soil Framework Directive, most costs would relate to existing measures, and as such would not in most cases be additional to the current baseline. However, increased emphasis on sealing in existing measures such as the SEA and EIA Directives may lead to slight additional costs, as follows:</p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>Increased administrative burdens for developers, when considering sealing under current regime, if this is extended to meet new challenges.</li> <li>Possible minor negative impact on some development in cases where SEA and EIA investigations reveal significant concerns regarding sealing, which could lead to delays or cancellations of development projects.</li> </ul>

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<p><b><u>Risk prevention, mitigation and restoration:</u></b> (Articles 6-8)</p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>Improved information allowing for more targeted action to deal with identified soil threats.</li> <li>Level playing field – UK land managers better able to compete with other Member States who have to increase levels of soil protection above current levels to comply with the Framework Directive.</li> </ul> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>Improved levels of soil protection across EU 25, with minimum standards required (reflecting current UK requirements).</li> <li>Will result in a complete assessment of risk areas (in relation to erosion, organic matter decline and compaction), allowing for improved targeting of soil protection measures.</li> </ul>	<p><b><u>Risk prevention, mitigation and restoration:</u></b> (Articles 6-8)</p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>&lt;£150K (England &amp; Wales) estimated to identify risk areas (Article 6), largely based on existing data, plus additional expenditure required in Scotland and Wales.</li> <li>Administrative burden on UK Government in drawing up the 'programme of measures' (Article 8).</li> <li>Some implementation costs possible, as current soil protection mechanisms may need to be reshaped slightly to meet more closely SFD requirements.</li> <li>Potential additional administrative burdens for land managers, in adjusting to changes made to existing soil protection measures.</li> </ul>
<p><b><u>Soil contamination:</u></b> (Articles 9-14)</p> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>Potentially improved mitigation/remediation in cases where cross border contamination occurs (i.e. Northern Ireland/Eire).</li> </ul>	<p><b><u>Soil contamination:</u></b> (Articles 9-14)</p> <p>No additional costs have been identified for soil contamination under option 3. This reflects the fact that the revised Directive, as described in paragraph 54 would include contamination provisions that closely resemble the measures in place already in the UK, and would thus require no significant additional expenditure.</p>
<p><b><u>Awareness raising, reporting and exchange of information:</u></b> (Articles 15-26)</p> <ul style="list-style-type: none"> <li>Potential efficiency savings via improved cross border administration of soil protection/monitoring etc, i.e. Northern Ireland/Republic of Ireland.</li> <li>Potential minor environmental and efficiency benefits through the Commission providing a platform for exchange of information.</li> </ul>	<p><b><u>Awareness raising, reporting and exchange of information:</u></b> (Articles 15-26)</p> <ul style="list-style-type: none"> <li>Costs of awareness raising (Art 15) not analysed in Commission Impact Assessment. However, experience of running awareness raising campaigns suggests set up costs of £2M, with ongoing costs of £0.5M p/a (for 25 years).</li> <li>General financial and administrative costs associated with transposition of new legislation.</li> </ul>
<p><b>TOTAL BENEFITS: Minimal</b></p>	<p><b>TOTAL COSTS: in excess of £10m - £11m<sup>8</sup></b></p>

## OPTION 4: Strategy only

See paragraph 49 of the RIA for outline of the Strategy

Under Option 4, there are no additional costs and benefits over and above the current baseline, as this option would see the UK retain existing soil protection and improvement measures as in place at present. However, there are a number of advantages and disadvantages associated with an approach that would see the UK negotiate the Framework Directive elements out of the Soil Thematic Strategy package. Therefore, this table describes advantages and disadvantages, rather than costs and benefits. For costs and benefits, see the baseline, described in paragraph 43 of the RIA.

Advantages	Disadvantages
<p><b><u>General Provisions</u></b> (Articles 1-4)</p> <ul style="list-style-type: none"> <li>Potential significant costs associated with Articles 3 &amp; 4 are avoided.</li> </ul>	<p><b><u>General Provisions</u></b> (Articles 1-4)</p>
<p><b><u>Soil Sealing:</u></b> (Article 5)</p> <ul style="list-style-type: none"> <li>No significant additional financial costs for construction industry, as planning requirements etc remain the same.</li> <li>Amount of land available for development not effected.</li> <li>Land can be used efficiently, as new restrictions on type of development, as proposed in current draft directive, are not implemented.</li> </ul>	<p><b><u>Soil Sealing:</u></b> (Article 5)</p> <ul style="list-style-type: none"> <li>No <i>additional</i> incentives for spatial planning/ construction sectors to enhance understanding of sealing issues and improve means of addressing these, beyond levels already required.</li> </ul>
<p><b><u>Risk prevention, mitigation and restoration:</u></b> (Articles 6-8)</p> <p><b>Economic</b></p> <ul style="list-style-type: none"> <li>No additional financial or administrative burdens for government, above current expenditure.</li> <li>No additional financial or administrative burdens for agricultural sector.</li> </ul> <p><b>Environmental</b></p> <ul style="list-style-type: none"> <li>Soil protection measures continue to be targeted according to level of risk specific to the UK.</li> </ul>	<p><b><u>Risk prevention, mitigation and restoration:</u></b> (Articles 6-8)</p> <ul style="list-style-type: none"> <li>Risk that other MS will not address problems. UK agricultural sector may be at a competitive disadvantage with other MS where soil protection measures are weaker.</li> <li>Soil degradation continues across Europe, especially in Member States where domestic legislative backing for soil protection measures is not forthcoming.</li> </ul>
<p><b><u>Soil contamination:</u></b> (Articles 9-14)</p> <ul style="list-style-type: none"> <li>No significant additional financial burdens for government. Continue to use existing mechanisms for addressing soil contamination and sealing.</li> <li>No significant additional administrative burdens for government.</li> <li>Contamination/sealing measures remain targeted according to level of risk in the UK.</li> <li>No additional financial or administrative burdens for property/industry sectors.</li> </ul>	<p><b><u>Soil contamination:</u></b> (Articles 9-14)</p> <ul style="list-style-type: none"> <li>Risk that other MS will not address problems. UK property/industry sectors may be at a competitive disadvantage with other MS whose contamination regimes are looser.</li> <li>Overall threat of contamination to remain or increase across EU, as no legislative action (on top of what is undertaken via other mechanisms such as the ELD, Water FD, Waste FD, IPPC, Groundwater Daughter Directive etc) is taken.</li> <li>Ongoing financial and administrative costs of</li> </ul>

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	current contamination regime.
<b><u>Awareness raising, reporting and exchange of information:</u></b> (Articles 15-26)	<b><u>Awareness raising, reporting and exchange of information:</u></b> (Articles 15-26) <ul style="list-style-type: none"> <li>No platform for exchange of information provided by the Commission, so potential minor environmental and efficiency benefits not realised.</li> </ul>
<b>TOTAL BENEFITS: Minimal</b>	<b>TOTAL COSTS: Minimal</b>

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<sup>1</sup> E.g. preventing wind or rain erosion from taking place on a mountain top.

<sup>2</sup> In 1998 England local authorities received an additional £12m pa via the Revenue Support Grant settlement for inspection duties under Part IIA of the Environmental Protection Act 1990, which deals with contaminated land. However, the approach to inspection differs. In particular there is no requirement to inspect whole classes of site on the basis that they might be problematic, and no requirement to inspect individual sites without regard to actual evidence of a potential significant pollutant linkage being present. A more risk-based and prioritised approach applies.

<sup>3</sup> Environment Agency 2002 – ‘Dealing with Contaminated Land in England’ Report

<sup>4</sup> Note that in connection with the Environment Protection Act (Part IIA), local authorities currently spend money on inspection of individual sites, but this is carefully targeted to sites which warrant it according to evidence and a carefully drawn-up inspection strategy and prioritised programme. This will result in a minor reduction to the total costs of site investigations as described under Option 2.

<sup>5</sup> For the purpose of this RIA purpose, the assumption is made that Annex II covers the same range of activities.

<sup>6</sup> A further example of the costs associated with the inventory of contaminated sites is as follows: Article 11 (with Annex II) requires Member States to identify all former military sites. There are an estimated 92,000 such sites in the UK. The average cost of measuring concentration levels of dangerous substances on each site is £22,000, resulting in a total estimated cost of £2.024 billion. If 10% (9,200) of these sites needed further on site risk assessment (assuming an average cost of £100,000), this could cost a further £0.92 billion. Therefore, the costs of meeting the Article 11 identification procedure, as regards “contaminated former military sites” alone, is estimated to be about £3bn.

<sup>7</sup> Total discounted costs above the baseline.

<sup>8</sup> Total discounted costs above the baseline.

## Annex II

### Current Soil Protection & Improvement Policy

1. The UK already has a good story to tell in terms of protecting and improving its soils in relation to the threats outlined in the Soil Framework Directive. Measures in place (or planned) in the UK stem from both domestic and Community policy. Some of the key measures delivering the UK's soil protection and improvement regime are described below. We have not set out in detail each and every measure in place and we have illustrated the different provisions with a brief account of provisions in one or more of the regions.

#### **Integration of soil protection in development of policies likely to impact upon soil functions** (relevant to Article 3 of the Directive)

##### **Strategic Environmental Assessment (SEA) Directive**

2. **Scotland:** The SEA Directive has been transposed into Scottish legislation by the Environmental Assessment (Scotland) Act 2005. This Act ensures that environmental considerations (both good and bad) are taken into account alongside other (e.g. economic or social) considerations in the development of various *plans and programmes*, hereafter referred to as 'plans'. This consideration must happen early in a plan's preparation – i.e. when it can still be easily adapted. The Directive requires the owners of relevant plans to: (i) collect relevant environmental information and identify likely environmental effects of proposed plans; (ii) consult the public and environmental authorities; (iii) take environmental considerations and reasonable alternatives into account (alongside other considerations) and state publicly how they have done this; and (iv) monitor significant environmental effects of plans so as to be able to address any adverse effects.

3. **UK:** The SEA Directive has also been implemented in England, Wales and Northern Ireland. Note that the Environmental Impact Assessment Directive (described below) is also relevant to Article 3.

#### **Precautionary measures** (relevant to Article 4)

##### **Environmental Impact Assessment Directive**

4. **England & Wales:** The EIA Directive applies to a very wide range of development *projects* – i.e. physical operations which have a direct effect on the environment (e.g. domestic, industrial and infrastructure development, certain farming projects etc). Where such projects are likely to have a significant effect

on the environment, they may not proceed (i) without being made subject to an EIA; and (ii) without development consent from the relevant authority, which will depend on the various environmental, social and economic costs and benefits of a project as appropriate. There is a wide range of EIA Legislation in place in England and Wales, much of which is especially relevant to soil protection. Key examples of this legislation are The Town and Country Planning (Environmental Impact Assessment) (England and Wales) Regulations 1999 (SI 1999 No. 293), and the Environmental Impact Assessment (Agriculture) (England) (No.2) Regulations 2006, and the Environmental Impact Assessment (Uncultivated Land and Semi-natural Areas) (Wales) Regulations 2002 (S.I. 2002/2127) as amended.

5. **UK:** The EIA Directive has also been implemented in Scotland and Northern Ireland. Note that the Strategic Environmental Assessment Directive (described above) is also relevant to Article 4.

## **Soil Sealing** (relevant to Article 5)

### **The Planning System**

6. **England:** The planning system provides strategic direction for the use of land, and control over the details of individual developments. An extensive body of legislation establishes the powers and duties given to various agencies and the procedures involved. Central Government provides a broad and directional policy framework.

7. The aim of the planning system is to help deliver sustainable development: making sure that provision is made for the developments the country requires, taking full account of *environmental, resource, economic* and *social* considerations. Section 39 of the Planning and Compulsory Purchase Act 2004 imposes a duty on persons and bodies responsible for preparing a regional spatial strategy (RSS) or local development document (LDD) - see paragraphs 29 and 30 below - to exercise those functions with the objective of contributing to the achievement of sustainable development.

8. The UK Government determines national planning policies and for the most part these are set out in 'white papers' (for example the Government's 2005 UK strategy for sustainable development - *Securing the Future*), planning policy statements (PPSs) which through the Government's programme of planning reform are replacing planning policy guidance notes (PPGs) and departmental circulars. PPS1 *Delivering Sustainable Development* sets out the overarching planning policies on the delivery of sustainable development through the planning system, including on the prudent use of natural resources. As set out in PPS1 this includes ensuring that we use natural resources wisely and efficiently, in a way that respects the needs of future generations. This means enabling more sustainable consumption and production and using non-renewable resources



(including soils) in ways that do not endanger the resource or cause serious damage or pollution. This national policy framework must be taken into account by those preparing RSSs and LDDs, and in the determination of planning applications.

9. Regional planning bodies (RPBs) prepare and produce RSSs reflecting the needs and aspirations for sustainable regional development and land use. These look forward for a ten to 15 year period and reflect, and build on, the policies set out at national level. RSSs provide a broad development strategy including the scale and distribution of new housing, priorities for the environment and agriculture, as well as waste treatment and disposal.

10. At the local level, local planning authorities prepare LDDs that set out the spatial planning strategy for the local area. Again, these should be prepared having due regard to national policies, and should also be in general conformity with the RSS. Local planning authorities must determine planning applications in accordance with the statutory development plan which comprises development plan documents (a type of LDD) and the relevant RSS, unless material considerations indicate otherwise. Relevant and recent national policy, particularly where this points to a different decision than suggested by the development plan, can be a material consideration.

11. The Planning and Compulsory Purchase Act 2004 requires the *sustainability appraisal* of RSSs and LDDs. Sustainability appraisal incorporates the requirements of the *Strategic Environmental Assessment (SEA) Directive*. This is where the emerging planning strategies and content of RSS and LDDs is tested and the implications for soils considered. The nature and consideration of soils is multifaceted and often complex, with direct or indirect overlap with other policy considerations directly related to the use and development of land, including flood plain management and versatile land use. Sustainability appraisal has been developed as part of the Government's planning reform programme to ensure that the choices which are made during the plan-making process at regional and local level are based on clear evidence of their impacts on society, the environment and the economy. Sustainability appraisal focuses on the full range of social, environmental, and economic effects and integrates environmental concerns with the other pillars of sustainable development. The guide '*Sustainability Appraisal of Regional Spatial Strategies and Local Development Documents*' was published in November 2005.

12. Where EIA is required for planning applications for specific developments then soil related issues form part of the appraisal.

13. The Government continues to put emphasis on considering in the planning system the natural qualities of soil. For example, in December 2006 the Government consulted on a new PPS *Planning and Climate Change*, which will form a supplement to PPS1. This draft PPS requires RPBs, when drawing up

RSSs, to recognise the potential of and encourage those land management practices that help secure *carbon sinks*, including non-living reservoirs such as soil. Similarly, PPS 7 advises planning authorities, when preparing LDD's and determining planning applications, to take account of the need to protect natural resources, including soil quality and best and most versatile agricultural land.

14. **Wales:** In Wales, overall planning policy is set out in the Wales Spatial Plan, with guidance provided by Technical Advice Notes (TANS). There is also an ongoing policy to protect Best and Most Versatile Land according to Agricultural Land Classification. For example, in 2006, approximately 200 ha of land was surveyed to produce a detailed classification for a spatial development plan for a local authority. Note that there is no equivalent of PPS1 in Wales, as Welsh planning policies were developed later than those in England, so sustainability objectives were incorporated as intrinsic elements of the Wales Spatial Plan and planning guidance.

15. **UK:** Similar mechanisms are in place in Scotland and Northern Ireland. For example, Scottish equivalents include Scottish Planning Policy, National Planning Policy guidelines and Planning Advice Notes.

## **Soil erosion, organic matter decline, compaction** (relevant to Articles 6-8)

### **Data**

16. **UK Overview:** We already have much of the data required for identifying the soil threats (particularly on erosion and organic matter) outlined in Article 6. Indeed, there are already erosion risk maps in existence. These are currently being refined via Water Framework Directive implementation. We have data on organic matter levels, including good evidence of organic matter decline. We also have anecdotal evidence on structural damage to soils, which could relatively easily be augmented by data on vulnerable soil types, in order to identify risk areas as required under Article 6 of the draft Directive. We are therefore in a good position to develop a targeted programme of measures as required under the Directive (Article 8), certainly as regards the key threats to soils *in the UK*<sup>1</sup>.

### **CAP: Cross Compliance**

17. **England:** Cross-compliance in England includes four soil standards of Good Agricultural and Environmental Condition (GAEC) relating to soil erosion, soil structure and organic matter that farmers must abide by. Similar measures have been adopted in Northern Ireland, Scotland and Wales. All farmers in receipt of the single payment are subject to a possible cross compliance inspection each year, including inspections on soil measures.

18. Soil Protection Review: The requirement to conduct a Soil Protection Review (GAEC 1) covers identification of risk (erosion, organic matter decline & compaction) on agricultural soils. Where risks are identified, farmers are required to resolve the problem by determining and implementing preventative or remedial measures. In cases where such measures are failing, or where soil is being badly managed, the Secretary of State for the Environment, Food and Rural Affairs can give specific guidance and directions which the farmer is required to follow. The Soil Protection Review is accompanied by soil management guidance designed to enable farmers to implement appropriate solutions to the on farm problems they encounter. This guidance, in conjunction with the Soil Protection Review, aims to deliver good practice soil husbandry across England, and should thus deliver huge benefits to soils.

19. In addition to the Soil Protection Review, which covers all soil problems associated with agricultural land use, further soil protection measures are included in Cross Compliance as follows:

- GAEC 2, on the management of land after combinable crops have been harvested. On land that has carried a crop of oil-seeds, grain legumes or cereals (other than maize) which have been harvested using either a combine harvester or a mower, farmers are required to meet set conditions to ensure that the land is not left in a state where run-off is likely to occur.
- GAEC 3, on undertaking mechanical operations on waterlogged soil. This standard aims to reduce compaction on soils by preventing farmers from undertaking such operations when soil is waterlogged, unless a pre-set exemption applies. cross compliance provisions also take account of the damage that can be done to soils through over-grazing and unsuitable supplementary feeding of livestock (GAEC 9).
- GAEC 4, on the burning of crop residues. This standard prohibits the burning of crop residues and aims to ensure that the organic matter remains in the soil.

20. **Scotland:** Good Agricultural and Environmental Conditions (GAEC) for Scotland have been developed on the basis of the CAP framework established in the European Legislation, to address the following issues:

- Soil erosion – protecting soil from erosion via standards on post-harvest management of land; wind erosion; soil capping; erosion caused by livestock; maintenance of functional field drainage systems; and burning on moorland (via the Muirburn Code).
- Soil organic matter – maintenance of soil organic matter levels via arable crop rotation standards and; arable stubble management.
- Soil structure – maintenance of soil structure, via appropriate machinery use.

21. The GAEC measures for Scotland were developed to reflect Scottish conditions and the wide variability of soils, habitats and farming systems found throughout Scotland. The GAEC measures are mandatory and must be followed in order to comply with cross compliance.

22. **UK:** Similar Cross Compliance requirements are also in place in Wales and Northern Ireland, where soil management standards require land managers to address soil erosion, soil organic matter, and soil structure. Similar to the Soil Protection Review in England, SPS claimants in Wales are required to prepare a Soil Assessment Record booklet.

### **CAP: Agri-environment**

23. The UK has developed a range of options under agri-environment schemes to encourage farmers to address any threats to soil that demand more specific management than complying with the GAEC standards. Payments are available to encourage farmers to employ management practices which reduce soil erosion and run-off, and improve and protect water and soil quality.

24. **England:** In England, farmers are encouraged to produce detailed soil management plans, which include a field by field risk assessment of the holding, and measures to address identified risks. Additional direct measures to improve soil management include options for the management of high erosion risk cultivated land, and of maize crops to reduce soil erosion. Agri-environment schemes also fund measures for other purposes, but which also have a positive affect on soils (including on soil organic matter content), such as buffer strips on cultivated land, reducing cultivation depths, under-sowing spring cereals and beetle banks. Similar measures are in place in Scotland, Wales and Northern Ireland.

25. Agri-environment is widely available to farmers. Around 55% of agricultural land in England is already covered by existing agreements, of which 45% is in Entry Level Stewardship (ELS). The target for ELS is 60% of agricultural land by the end of 2007. 40% of ELS agreement holders have signed up to some soil management options. If ELS membership reaches the 60% land coverage target, we would expect to see a very significant improvement in the way agricultural soils are managed. In addition, Higher Level Stewardship (HLS) is targeted at where risks are considered to be greatest, and also covers threats to soils.

26. **Scotland:** Land Management Contracts (LMCs) include measures which will protect soils (e.g. buffer strips, retaining winter stubbles and nutrient management) from degradation caused by agriculture. They will play a key role in the delivery of the 2007-13 Rural Development Programme for Scotland (SRDP). Tier 3 level LMCs will involve the integration of a number of existing schemes such as the Rural Stewardship Scheme (RSS), Organic Aid Scheme (OAS),

Farm Business Development Scheme (FBDS), Scottish Forestry Grant Scheme (SFGS) and SNH Natural Care Schemes. The aim is to provide a one-stop shop for land managers to apply for rural development funding.

27. **UK:** Similar agri-environment schemes are in place in Wales (via Tir Gofal and Tir Cynnal – which encourages agricultural practices which protect and enhance the landscapes of Wales, their cultural features and associated wildlife, and include a requirement for applicants to produce resource management plans detailing how they will manage fertiliser and manure, and prevent erosion and run-off) and Northern Ireland (via the Environmentally Sensitive Area Scheme, and the Countryside Management Scheme, aiming to encourage farmers and landowners to adopt environmentally friendly practices, and contribute to the delivery of the Northern Ireland Biodiversity Strategy).

## **Water Framework Directive**

28. **UK Overview:** The Water Framework Directive requires the introduction of programmes of measures to achieve environmental objectives in relation to bodies of water. The UK is taking a holistic approach to ensure that diffuse pollution is minimised in order that environmental objectives can be achieved, through actions to encourage good soil conditions (structure, organic matter and erosion control). A Programmes of Measures are being developed across the UK to identify priorities for different types of preventative or remedial action, targeted at national, catchment, and specific water body scales.

29. **Scotland:** The Directive became law in Scotland during 2003 through the Water Environment and Water Services (Scotland) Act 2003 (WEWS Act) which establishes arrangements for the protection of the water environment in Scotland. The introduction of a transparent and participative river basin management planning system will provide a framework within which targets, actions, priorities, costs and benefits of environmental change are all taken into account. This will allow environmental needs to be balanced with social and economic needs. Scotland has been divided into three river basin districts, each of which will have a river basin management plan. Most of Scotland is covered by the Scotland river basin district, while waters shared with England are incorporated into the Solway-Tweed or the Northumbria river basin districts in the south of Scotland. The Water Environment (Controlled Activities) (Scotland) Regulations 2005 were made under the WEWS Act, and establish a framework to protect and manage our water resources, based on an assessment of the risk posed to the water environment. This will include risks of diffuse pollution associated with soil management.

## **Catchment Sensitive Farming (CSF)**

30. CSF initiatives have been established to help the UK meet Water Framework Directive objectives, and aim to instigate soil management change at

the catchment level. This includes promoting both the soil management planning process and the uptake of agri-environment scheme options.

31. **England:** The initiative was rolled out in April 2006 in forty priority catchments in England, and seeks to achieve reductions in diffuse water pollution from agriculture by encouraging CSF, via a voluntary programme of measures. CSF is land management that keeps diffuse emissions of pollutants to levels that are consistent with the ecological sensitivity and uses of rivers, groundwaters and other aquatic habitats, both in the immediate catchment and further downstream. CSF encourages best practice in the use of fertilisers, manures and pesticides; promoting good soil structure to maximise infiltration of rainfall and minimise run-off and erosion; protecting watercourses from faecal contamination (e.g. with fencing and livestock crossings), and from sedimentation and pesticides (e.g. with buffer strips); reducing stocking density or grazing intensity; reverting to grassland etc. The CSF Programme in England is augmented by a work strand aimed specifically at improving on farm management of Soil Organic Matter.

32. **Wales:** A Catchment Sensitive Pilot Scheme is underway in Wales, which aims to improve the environment and reduce farming's impact on local streams, rivers and lakes. It also includes guidance on manure and nutrient management, free soil analysis and other technical advice and funding for capital work to reduce run-off and erosion. Focussing on two priority catchments, the project will cover the management of livestock access to streams, the separation of clean and dirty water, and the improvement of slurry-handling facilities.

33. **UK:** In Scotland, the Monitored Priority Catchment Scheme promotes good soil management practices, and uptake of appropriate agri-environment measures to help the UK meet Water Framework Directive objectives. In Northern Ireland

### **The Habitats Directive**

34. **UK:** The main aim of the EC Habitats Directive is to promote the maintenance of biodiversity by requiring Member States to take measures to maintain or restore natural habitats and wild species at a favourable conservation status, introducing robust protection for those habitats and species of European importance. In applying these measures Member States are required to take account of economic, social and cultural requirements and regional and local characteristics.

35. In the UK the Directive has been transposed into national laws by means of the [Conservation \(Natural Habitats, & c.\) Regulations 1994](#) (as amended), and the [Conservation \(Natural Habitats, & c.\) Regulations \(Northern Ireland\) 1995](#) (as amended). These are known as 'the Habitats Regulations'. Most Special Areas of Conservation (SACs) on land or freshwater areas are underpinned by notification

as Sites of Special Scientific Interest (SSSIs) (or as Areas of Special Scientific Interest (ASSIs) in Northern Ireland). In the case of SACs that are not notified as SSSI, positive management is promoted by wider countryside measures, while protection relies on the provisions of the Habitats Regulations.

36. As soils underpin all terrestrial ecosystems and in the case of “peat habitats” are an intrinsic part of the designated features, the Habitats Directive provides a means to protect soil and its habitat support functions. The provisions of the Directive require Member States to introduce a range of measures including the protection of species listed in the Annexes; to undertake surveillance of habitats and species and produce a report every six years on the implementation of the Directive.

### **Others**

37. There is a wide range of other agricultural schemes encouraging environmentally sensitive farming which fall under the scope of the Rural Development Programme for England (RDEP), the Scottish Rural Development Plan (SRDP), the Rural Development Programme in Northern Ireland, and the Rural Development Plan for Wales.

38. **Environmentally Sensitive Areas** (ESA) cover 10% of agricultural land in England. ESAs are designed to ensure that land management practices preserve environmentally important features in parts of the country with high landscape and wildlife importance. Combined, these schemes offer protection for the more remote parts of the country. In Scotland, the **Rural Stewardship Scheme** (RSS) is an Agri-environment Scheme designed to encourage farmers, crofters and Commons Grazing Committees to adopt environmentally friendly practices and to maintain and enhance particular habitats and landscape features.

39. Forest covers around 12% of land area<sup>2</sup> of Great Britain. In the UK the Forestry Commission (FC) plays a major role in supporting conversion of land to afforested land using Rural Development funds. They also encourage best practice through the publication of guidelines for **sustainable forestry management** which are adhered to within the FC's own forests. Private forest owners who enter into woodland support schemes are required to follow this guidance as a condition of entry into the woodland support scheme. Combined, these cover over 50% of UK forests, and include guidelines on sustainable soil management. Sustainable soil management guidelines are therefore applied to a significant proportion of forests and virtually all new planting projects.

### **Soil contamination** (relevant to Articles 9-14)

40. *The UK has one of the most comprehensive regimes for identifying and remediating contaminated land, covering all sources and land uses.*

*Redevelopment and regeneration is already dealing with much of our inherited legacy of contaminated land.*

### **The Town and Country Planning system**

41. **England:** Deals with risks from contamination by aiming to ensure that development is safe and “suitable for use”. The planning system secures a large proportion of site investigation and remediation, backed up by the regime introduced by “Part IIA” (see below).

42. Where planning applications are made on land which may present risks, the applicant is required to assess and report on the risks, and if permission is granted will be required to carry out any remediation needed to ensure the land is suitable for use. Before granting planning permission on land affected by contamination a planning authority should be satisfied that the proposed development does not create or allow the continuation of unacceptable risk arising from the condition of the land in question, and as a minimum the land should not be capable of being determined as contaminated land under Part IIA. In particular the Local Planning Authority takes into account whether the new usage is particularly sensitive, for example housing likely to be used by families with children, or a day nursery. Thus, development provides an opportunity to consider the potential risks posed by land affected by contamination, and provides opportunity and resources to carry out remediation. This regime is risk-based; and it is reactive in that it responds to applications and cannot secure investigation or remediation in other circumstances, although Regional Spatial Strategies and Local Development Documents play a positive role in steering development, for example onto appropriate previously developed land.

43. **UK:** Similar provisions are in place in Wales, Scotland and Northern Ireland

### **Environment Protection Act 1990**

44. **England, Scotland and Wales:** Provides a pro-active approach to the identification and remediation of contaminated land, where there has not been any identifiable breach of a pollution prevention regime, and where there may be no development in prospect. Under Part IIA of the Environmental Protection Act, Local Authorities have an ongoing duty to inspect their areas for contaminated land (i.e. land presenting unacceptable risk) and to secure its remediation. Where contaminated land is formally identified, one of three ‘routes’ to a resolution must be taken by the enforcing authority, as follows:

- i. Voluntary agreement by those liable (usually the polluter(s) and or owners) to remediate. In this case a remediation statement is agreed and published.



- ii. If voluntary action cannot be agreed, the Local Authority must serve a remediation notice upon the liable parties, setting out remediation requirements, including a timetable for doing so, and establishing who is to bear the costs. Failure to comply with a remediation notice is a criminal offence.
- iii. In some cases, the Local Authority may conclude that one or more remedial requirements would be unreasonable, having regard to the costs involved and the seriousness of the harm or pollution in question. In such cases, they issue a 'remediation declaration' which records the contamination problem, and why no remedial action is required. This might be because the risks prove less significant than initially thought, or because the benefits associated with addressing the risk are outweighed by the costs - whether economic, social or environmental. Liability for the remediation generally falls to the polluter or site owner. Extensive binding Statutory Guidance helps ensure high quality and risk-based decision making.

45. Part IIA strongly encourages voluntary action, allows liability to be passed on when land changes hands, ensures land condition and liabilities are reflected in land values, and encourages buyers, sellers, lenders and conveyancers etc. to exercise considerable care in land transactions wherever there is a possibility of contamination. As a result, much investigation and remediation takes place without formal action being taken under Part IIA.

46. **Northern Ireland:** Note that no such regime is in place in Northern Ireland at present, though proposals are to be implemented shortly.

### **Environmental Permitting Controls**

47. **UK Overview:** There are a number of Environmental Permitting control measures in place in the UK which help prevent and deter new contamination, and where it nevertheless arises, offer a means of remediation. These include:

- Pollution Prevention and Control Regulations: These Regulations provide a licensing system for current activities which have the potential to cause pollution, and include clean-up mechanisms for new contamination, and a requirement to leave sites in a "satisfactory state" at the end of authorised activity. The Regulations implement the IPPC Directive, and cover all environmental media in over 8000 industrial installations in the UK.
- Waste Management controls: These help implement the **Waste Framework Directive** and **Landfill Directives**. The licensing arrangements, and licensing exemptions, help to prevent waste management activity causing land contamination (amongst other risks) and are proposed to be integrated with the regime described above. The controls also include measures to remedy the effects of illegal dumping and fly-tipping on land.

## Environmental Liability Directive

48. **UK Overview:** The Environmental Liability Directive (ELD) includes measures to secure remediation of new environmental damage, and provides a further incentive for the prevention of contamination by operators of potentially polluting activities. Regulations to implement the Directive are in preparation. The ELD covers some of the contamination problems addressed under the Soil Framework Directive proposals, but only those arising from incidents etc. occurring post 2007 (i.e. it doesn't address historical contamination, as required under the Soil Framework Directive proposals).

### Common Law:

49. Allows for anyone to seek redress for damage or loss to private interests caused by the actions or failures of another. This can for example be used by plaintiffs where contaminants escape onto adjoining land and cause problems. However, a successful action will not necessarily ensure that environmental harm is remedied.

### Other

50. In addition to the existing measures already in place to address contamination, a number of other measures will be implemented in the near future. For example, the Water Framework Directive (WFD) establishes a process for setting environmental targets for bodies of water which Member States are required to meet through the implementation of programmes of measures. Historic land contamination is among the continuing sources of water contamination. The Water Framework Directive will thus act as a driver for increased remediation of contaminated sites (largely via existing mechanisms such as the **Water Resources Act**, or Part IIA of the Environmental Protection Act), thus enabling the UK to meet the objectives established under the WFD. Consultation papers are being issued in 2007 concerning the problem of new diffuse pollution which can arise when land is used in ways which enable harmful substances to enter groundwater or other water courses.

51. The new **Groundwater Directive** (a daughter directive to the Water Framework Directive) includes specific obligations to prevent and/or limit the entry of listed pollutants into groundwater. Historic land contamination can give rise to the entry of such pollutants. As with the Water Framework Directive, this is expected to act as a driver for Member States to increase the levels of protection afforded to water courses by utilising existing measures, such as Part IIA of the Environmental Protection Act.

## **Awareness raising, reporting and exchange of information** (relevant to Articles 15-26)

52. Costs of implementing the monitoring requirements of the SFD depend upon the extent to which existing domestic monitoring schemes can provide the required information. Much of the data gathering and monitoring being conducted as part of the UK's preparations for the Water Framework Directive will address soil erosion and the issues surrounding this, and should therefore be applicable in meeting monitoring requirements of the Soil Framework Directive.

53. We are spending c.£250K per year on making the information (described at 2) more widely available, and on using the information for risk analysis purposes to aid us in policy development. The policy mechanisms described above, plus changes to the British planning system, and revisions to the British Standard for Topsoil have all contributed to raising land manager's awareness of the impacts their actions have upon soils. The development of an evidence base and engagement with stakeholders has also contributed to raising the awareness of planners and the construction sector regarding the impacts of their actions.

## **Other relevant measures in the UK**

### **National Soil Strategies/Action Plans**

54. **England:** The First Soil Action Plan<sup>3</sup> was established to address threats to soils, and included measures to mitigate effects of sealing, address non-agricultural use of soils; raise awareness of soils issues, and has data collection and reporting built in to its provisions. Published in May 2004, this presented 52 actions for Government and others to undertake to better protect and manage England's soils to enable it to carry out all its functions. It aimed to integrate consideration of soils functions into government policy generally, from farming to planning and construction. The Soil Action Plan had a three year timeframe and a Soil Strategy for England, from 2007, is in development, and will continue where the Soil Action Plan left off.

55. **UK:** In Scotland, work is currently ongoing to develop 'Soil Strategy'. The Scottish Soil Strategy will provide a framework for soil protection. A key aspect of this strategy will be the protection of soil as an asset - for the future of the Scottish economy, as well as a contribution to the challenges set by climate change. The 'Environment Strategy for Wales' is already in place, and includes actions on planning and contaminated land, and on the development of a 'Soil Action Plan' which will address the threats posed by climate change, erosion, compaction, contamination, eutrophication and sealing to the soil functions, and includes actions to address and minimise the threats.

## **Potential interfaces with existing EC Legislation**

56. To illustrate further the extent to which soil degradation is already being addressed across the EU, the table below<sup>4</sup> indicates where extant European Legislation already exists in relation to specific Framework Directive requirements.

Article 1 (1)	Potential Interfaces
<p>(1) This Directive establishes a framework for the protection of soil and the preservation of the capacity of soil to perform any of the following environmental, economic, social and cultural functions:</p> <p>(a) biomass production, including in agriculture and forestry;</p> <p>b) storing, filtering and transforming nutrients, substances and water;</p> <p>(c) biodiversity pool, such as habitats, species and genes;</p> <p>(d) Physical and cultural environment for humans and human activities;</p> <p>(e) source of raw materials;</p> <p>(f) acting as carbon pool;</p> <p>(g) archive of geological and archaeological heritage.</p> <p>To that end, it lays down measures for the prevention of soil degradation processes, both occurring naturally and caused by a wide range of human activities, which undermine the capacity of the soil to perform those functions. Such measures include the mitigation of the effects of those processes, and the restoration and remediation of degraded soils to a level of functionality consistent with at least the current and approved future use.</p> <p>(2) This Directive shall apply to soil forming the top layer of the earth's crust situated between the bedrock and the surface, excluding groundwater as defined in Article 2(2) of Directive 2000/60/EC of the European Parliament and of the Council.</p>	<p>Waste Framework Directive 75/442/EC.  Water Framework Directive 2000/60/EC.  Plant Protection Products Directive 91/414/EEC.  Nitrates Directive 91/676/EEC.  Urban Wastewater Directive 91/271/EEC.  Landfill Directive 1999/31/EC.  Integrated Pollution Prevention and Control Directive 96/61/EC.  Strategic Environmental Assessment Directive 2001/42/EC.  Environmental Impact Assessment Directive 97/11/EC.  Assessment of Biocidal Products Directive 98/8/EC.  Habitats Directive 92/43/EC.</p> <p>Water Framework Directive 2000/60/EC.  Protection of Groundwater against Pollution Directive 2006/118/EC</p>
Article 2	Potential Interfaces
<p>For the purposes of this Directive, the following definitions shall apply:</p> <p>(1) 'sealing' means the permanent covering of the soil surface with an impermeable material;</p>	

## Soil Framework Directive Initial RIA: Annex II

(2) 'dangerous substances' means substances or preparation within the meaning of Council Directive 67/548/EC and Directive 1999/45/EC of the European Parliament and of the Council.	
<b>Article 3</b>	<b>Potential Interfaces</b>
<p>In the development of sectoral policies likely to exacerbate or reduce soil degradation processes, Member States shall identify, describe and assess the impacts of such policies on these processes, in particular in the areas of regional and urban and spatial planning, transport, energy, agriculture, rural development, forestry, raw material extraction, trade and industry, product policy, tourism, climate change, environment, nature and landscape.</p> <p>Member States shall make public those findings.</p>	<p>Strategic Environmental Assessment Directive 2001/42/EC. Environmental Impact Assessment Directive 97/11/EC.</p>

<b>Article 4</b>	<b>Potential Interfaces</b>
<p>Member States shall ensure that any land user whose actions affect the soil in a way that can reasonably be expected to hamper significantly the soil functions referred to in Article 1 (1) is obliged to take precautions to prevent or minimise such adverse effects.</p>	<p>Strategic Environmental Assessment Directive 2001/42/EC. Environmental Impact Assessment Directive 97/11/EC</p>
<b>Article 5</b>	<b>Potential Interfaces</b>
<p>For the purposes of preserving the soil functions referred to in Article 1 (1), Member States shall take appropriate measures to limit sealing or, where sealing is to be carried out, to mitigate its effects in particular by the use of construction techniques and products which will allow as many of those functions as possible to be maintained.</p>	<p>Construction Products Directive 89/106/EEC Strategic Environmental Assessment Directive 2001/42/EC. Environmental Impact Assessment Directive 97/11/EC</p>
<b>Articles 6-8</b>	<b>Potential Interfaces</b>
	<p>Water Framework Directive 2000/60/EC CAP Cross Compliance: Council Regulation (EC) no.1782/2003 &amp; Commission Regulation (EC) no.796/2004 CAP Agri-environment: Council Regulation (EC) no. 1698/2005</p>

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	Environmental Impact Assessment Directive 97/11/EC
<b>Article 9</b>	<b>Potential Interfaces</b>
For the purposes of preserving the soil functions referred to in Article 1 (1), Member states shall take appropriate and proportionate measures to limit the intentional or unintentional introduction of dangerous substances on or in the soil, excluding those due to air deposition and those due to a natural phenomenon of exceptional, inevitable and irresistible character, in order to avoid accumulation that would hamper soil functions or give rise to significant risks to human health or the environment.	<p>Environment Liability Directive 2004/35/EC.</p> <p>Integrated Pollution Prevention and Control Directive 96/61/EC.</p> <p>Landfill Directive 1999/31/EC.</p>
<b>Article 10 (1)</b>	<b>Potential Interfaces</b>
<p>(1) Member States shall, in accordance with the procedure laid down in Article 11, identify the sites in their national territory where there is a confirmed presence, caused by man, of dangerous substances of such a level that Member States consider they pose a significant risk to human health or the environment, hereinafter “contaminated sites”.</p> <p>That risk shall be evaluated taking into account current and approved future use of the land.</p> <p>(2) Member States shall establish a national inventory of contaminated sites, hereinafter “the inventory”. The inventory shall be made public and reviewed at least every five years.</p>	<p>Environment Liability Directive 2004/35/EC.</p> <p>Integrated Pollution Prevention and Control Directive 96/61/EC.</p> <p>Landfill Directive 1999/31/EC.</p>
<b>Article 11</b>	<b>Potential Interfaces</b>
<p>(1) Each Member State shall designate a competent authority to be responsible for the identification of contaminated sites.</p> <p>(2) Within five years from (transposition date), the competent authorities shall have identified the location of at least the sites where the potentially soil-polluting activities referred to in Annex II are taking place or have taken place in the past. For those purposes, the activities referred to in point 2 of Annex II shall be considered independently of the thresholds specified in Annex I to Council Directive 96/61/EC except for the activities carried out by micro-enterprises, as defined in point 3 of Article 2 in the Annex to Commission Recommendation 2003/361/EC and</p>	<p>Environment Liability Directive 2004/35/EC.</p> <p>Integrated Pollution Prevention and Control Directive 96/61/EC.</p> <p>Landfill Directive 1999/31/EC.</p>

## Soil Framework Directive Initial RIA: Annex II

<p>those relative to the rearing of livestock. The identification shall be reviewed at regular intervals.</p> <p>(3) In accordance with the following timetable, the competent authorities shall measure the concentration levels of dangerous substances in the sites identified in accordance with paragraph 2, and where the levels are such that there may be sufficient reasons to believe that they pose a significant risk to human health or the environment, an on-site risk assessment shall be carried out in relation to those sites:</p> <p>(a) within five years from (transposition date) for at least 10% of the sites;</p> <p>(b) within 15 years from (transposition date) for at least 60% of the sites;</p> <p>(c) within 25 years from (transposition date) for the remaining sites.</p>	
<b>Article 12</b>	<b>Potential Interfaces</b>
<p>(1) Where a site is to be sold on which a potentially polluting activity listed in Annex II is taking place, or for which national records, such as national registers, show that it has taken place, Member States shall ensure that the owner of that site or the prospective buyer makes a soil status report available to the competent authority referred to in Article 11 and to the other party in the transaction.</p> <p>(2) The soil status report shall be issued by an authorised body or person appointed by the Member State. It shall include at least the following details:</p> <p>(a) the background history of the site, as available from official records;</p> <p>(b) a chemical analysis determining the concentration levels of the dangerous substances in the soil, limited to those substances that are linked to the potentially polluting activity on the site;</p> <p>(c) the concentration levels at which there are sufficient reasons to believe that the dangerous substances concerned pose a significant risk to human health or the environment.</p> <p>(3) Member States shall establish the methodology necessary for determining concentrations levels referred to in paragraph 2(b).</p> <p>(4) The information contained in the soil status report shall be used by the competent authorities for the purpose of identifying</p>	<p>Environment Liability Directive 2004/35/EC.</p> <p>Integrated Pollution Prevention and Control Directive 96/61/EC.</p> <p>Landfill Directive 1999/31/EC.</p>

## Soil Framework Directive Initial RIA: Annex II

contaminated sites in accordance with Article 10(1).	
<b>Article 13</b>	<b>Potential Interfaces</b>
<p>(1) Member States shall ensure that the contaminated sites listed in their inventories are remediated.</p> <p>(2) Remediation shall consist of actions on the soil aimed at the removal, control, containment or reduction of contaminants so that the contaminated site, taking account of its current use and approved future use, no longer poses any significant risk to human health or the environment.</p> <p>(3) Member States shall set up appropriate mechanisms to fund the remediation of the contaminated sites for which, subject to the polluter pays principle, the person responsible for the pollution cannot be identified or cannot be held liable under Community or national legislation or may not be made to bear the costs of remediation.</p>	Environmental Liability Directive 2004/35/EC.
<b>Article 14</b>	<b>Potential Interfaces</b>
<p>(1) Member States shall. On the basis of the inventory and within seven years from (transposition date), draw up a National Remediation Strategy, including at least remediation targets, a prioritisation, starting with those sites which pose a significant risk to human health, a timetable for implementation, and the funds allocated by the authorities responsible for budgetary decisions in the Member States in accordance with their national procedures.</p> <p>Where containment or natural recovery are applied, the evolution of risk to human health or the environment shall be monitored.</p> <p>(2) The National Remediation Strategy shall be in application and made public no later than eight years after (transposition date). It shall be reviewed at least every five years.</p>	Environmental Liability Directive 2004/35/EC.

<sup>1</sup> Though it should be noted that we do not presently have sufficient data on salinisation. This is because in the UK, salinisation is not considered to be a problem. We are also data poor in relation to landslides.



## Soil Framework Directive Initial RIA: Annex II

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<sup>2</sup> Forestry statistics taken from National Statistics/Forestry.

<sup>3</sup> For more information, see <http://www.defra.gov.uk/environment/land/soil/pdf/soilactionplan.pdf>

<sup>4</sup> Note that this table is not an exhaustive list of all related EC Legislation.

## Annex III

### Initial UK analysis of the Commission's Impact Assessment

1. Our analysis of the Commission's proposals for the Soil Framework Directive, and the accompanying Impact Assessment (SEC(2006)620) has been conducted in accordance with principles of Better Regulation and sustainable development, as agreed at the European Council. These principles include proportionality, transparency, accountability, targeting, consistency, enforceability and achieving the right balance between environmental, economic and social considerations.

#### Commission Estimates:

2. As described in paragraph 19 of the Initial RIA, we have reservations regarding the costs and benefits cited in the Commission's Impact Assessment. An outline of the Commission's assessment of these costs is set out below followed by our initial analysis of the Commission's work.

#### ***Costs of implementing Framework Directive obligations (Commission estimates)***

3. The Commission estimate that the proposed Framework Directive obligations will impose the following annual costs:

- **€50 – 290 million** per year for the EU 25 for the first 5 years;
- Up to **€240 million** per year for the EU 25 in years 6 – 25;
- C. **€2 million** per year for the EU 25 thereafter.

4. Assuming these costs are distributed roughly equally amongst Member States, and assuming that the UK is an average Member State, these figures suggest that the proposed Framework Directive will impose costs on the UK of around €2 – €11.6 million per year for the first 5 years, and up to €9.6 million for years 6 – 25.

5. As described above, our initial analysis of the Commission's Impact Assessment suggests that their estimates are generally much lower than we would expect. In addition, the Commission have not taken account of a number of key provisions of the Framework Directive, such as the costs of introducing mandatory detailed Soil Status Reports for land transactions (Article 13). The inclusion of costs associated with these activities would significantly raise the Commission's estimates for the costs of implementing the proposed Framework Directive provisions.

***Benefits of implementing Framework Directive obligations (Commission estimates)***

6. The Commission does not provide figures for the benefits they would expect the Framework Directive to deliver. However, they suggest that the benefits should go a long way towards minimizing the estimated €38bn damage costs resulting from soil degradation processes. These savings would result from a number of benefits<sup>1</sup> they expect to emerge from the directive, such as:

- helping to reverse the trend of damage to soil quality and resources by reducing levels of erosion, decline in soil organic matter, compaction and sealing;
- helping to manage and remediate contaminated soils;
- further encouraging the development of land management practices that protect and enhance soil quality and resources;
- protecting resources through sustainable development;
- helping to safeguard and improve the public's enjoyment of environmental amenities.

7. We believe that much of what is outlined in the Soil Framework Directive can be achieved through the current and planned use of existing domestic and European legislative instruments. Further details of these are available at Annex II. However, some aspects of the proposed Framework Directive impose specific obligations on Member States, which would require action above and beyond measures already in place.

**Summary of Concerns**

- As it stands, the rationale for intervention cited in the Commission's Impact Assessment is not convincing:
  - It assumes current situation will remain into the future, ignoring action being undertaken by Member States and via EU legislation, e.g. ELD, WFD etc; and
  - It is generally lacking in evidence.
- There is no cost-benefit analysis of the policy options that are proposed as the means to reach the objectives of the Thematic Strategy;
  - Only three policy options were considered – the bare minimum.
- Many of the quantified costs of soil degradation ignore the efforts of current policies, resulting in significant over-estimates of these costs;
  - Other estimation procedures used are also often biased towards over estimation (e.g. basing quantitative analysis on data from MS

where identified problem is a particular issue, as with estimates for erosion/salinisation).

- It is unclear how several of the costs have been arrived at (e.g. erosion; SOM).
- The costs of some obligations in the proposed Directive are not analysed in the IA:
  - this lack of supporting evidence for some articles could have large cost implications for the UK and other MS which are not considered.

## Details

### ***Rationale for Intervention***

8. The assessment does not take into account the contribution of measures already in place. This raises two key concerns:

- it means that the analysis does not have a baseline from which to assess future action; and
- many of the damage costs quantified ignore the efforts of existing soil policies, which leads to a potentially huge overestimate of the costs of soil degradation. For example, the IPPC and Waste Framework Directives effectively prevent much potential new contamination, while the Environmental Liability Directive creates further incentives to prevent contamination of land. The Water Framework and new Groundwater Directives require preventative action where land contamination might impact upon the water environment.

9. Based on the costs of soil degradation to the EU25, the Commission argues that current soil protection regimes cannot reach the high level of soil protection that the EU has committed itself to, and therefore that further intervention is required. However, simply outlining the damage costs of soil degradation is not in itself a justification for intervention, although it is these costs that make up a key pillar of the Commission's rationale. Furthermore, we have concerns regarding the manner in which these costs were assessed.

10. On *Soil Erosion*, the figures presented are for 13 countries only. However, it is unclear how representative these countries are, given that they are described as "including the major Member States where erosion occurs" (footnote 51, page 30). This suggests that the costs are at the top end and unlikely to be representative of an average Member State.

11. On *soil erosion and soil organic matter decline*, the estimation procedure used is incorrect and biased towards overestimates. The correct procedure have

would be to multiply the damage cost per hectare by the amount of land where damages occur. However, in the Commission's Impact Assessment, the damage cost per hectare is multiplied by the amount of land where there is *risk* of damage. This is an overstatement because it does not consider the likelihood that damages will occur- i.e. damage will not occur on 100% of sites.

12. Furthermore, given the admission that there is no data on the amount of *organic matter* loss, how did the Commission determine damage costs? It is unclear how the cost of organic matter loss can be determined if the scale of loss is unknown.

13. *Salinisation* has limited relevance to many parts of Europe and this should be made explicit. The figures are taken from countries that suffer from salinisation and are therefore at the higher end of any cost estimate.

14. The conclusions in section 2.9 (p30) say that total costs of degradation could be up to €38 billion annually for EU-25. As described above, this does not take existing policy efforts into account and is therefore an overestimation of the true damage costs.

15. The 'Need for EU Action' cited by the Commission (p38-40) uses potentially strong illustrations to show why EU level intervention on soil protection is required. However, this section is simply made up of assertions which are not backed up with any supportive evidence. Of particular concern is the fact that no evidence is presented on how pan-European markets are affected by different soil protection regimes across Europe.

### ***Evaluation of policy options for delivering Framework Directive objectives***

16. Section 6 of the Impact Assessment discusses the various policy options that could be implemented to achieve the strategy objectives. We have some major concerns regarding this section:

- Only a bare minimum of 3 options are considered, and it unclear how these were selected. For example, more non-legislative options could have been considered.
- There is no cost/benefit analysis to complement this section and so the decision to pursue option 2 is not backed up by any analysis. While there are various references made to the 'examination' of the different options, it is not clear how the judgement relates to the evidence.

17. Section 7 covers the quantitative and qualitative analysis for the specified obligations. We also have some key concerns regarding this section of the Commission's Impact Assessment:

- It is unclear how these obligations were decided upon. It is also unclear why analysis was used to justify community action (e.g. by identifying

damage costs) while analysis has not been used to determine which obligations or form of action would be appropriate.

- Section 7.8 provides a table summarising the impacts of obligations specified in the Soil Framework Directive. Some of the figures are misleading when they are described as total annual additional costs because the baseline of existing policy measures has not been taken into account.

### *Sealing*

18. Article 5: for soil sealing there is no qualitative analysis of the impacts of any mitigating measures, nor is there any estimate made of the damage costs associated with sealing. It is therefore unclear the scale of the problem the article is seeking to address, and what the impact would be of any mitigating measures. In addition, the interface with other EU legislation should have been considered, but has not been.

### *Risk Identification*

19. Although Annex I lays out the parameters which any Member States risk assessment will have to measure, there is no analysis of the cost of these measures. These costs would depend on what sort of soil surveying operations Member States currently employ. It is unclear therefore, what additional measures will be required and what additional costs would be incurred.

20. Also, the administrative costs linked to the risk area identification have not been estimated - these could be significant if all sites need testing.

### *Contamination*

21. On the Soil Contamination provisions, the proposed obligations represent a very detailed regime for identifying and responding to risks that arise from land contamination, which differs significantly from the comprehensive regime already in place in the UK. The different approach and details may result in large additional costs which have not been considered in the report (page 43).

22. Article 9 requires regulation of the use of potentially dangerous substances to ensure soil is not polluted. However, there is no supporting analysis of this in the Impact Assessment; no identification of such pollutants nor discussion of the impact they might have or of the extensive role already played by existing and new EU measures such as the IPPC, Waste, Water and Environmental Liability Directives, plus the marketing and use regime. There is no estimate of damage or qualitative analysis of the impact of this additional measure or existing ones.

23. The Commission estimate the costs to the EU25 of establishing an inventory of contaminated sites at €51 Million per year (years 1-5), and a further €240 per year (years 1-25) to complete the inventory. Our initial estimates suggest that the actual costs will be **much higher than this**. Table 5 in the

Impact Assessment (p50) implies that all sites which are still classified as potentially contaminated following a preliminary survey will be subject to preliminary site investigations to confirm the existence of contamination. However, the proposed Directive does not in fact allow for a decision that an Annex II site does not need to be sampled. All such sites will require sampling, and in some cases a full risk assessment. In the UK, the preliminary stages may cost some £10-20K for an average 2ha site, while thorough site investigations to characterise sites and assess risks and decide remedial needs may cost some £50-75K. The Commission have estimated that in England, 100,000 sites would require such preliminary investigations (table 20, p100) which would result in costs of £1-2 Billion. We believe that this estimate presents a conservative estimate of the number of such sites in the UK. The Impact Assessment does not consider the costs associated with **reviewing and updating** the inventory of contaminated sites (Articles 10 & 11).

24. The list of “potentially polluting activities” in Annex II potentially includes huge areas of land. For instance, approximately one-quarter of the land in England falls within the scope of point 5 – former military sites. Many sites used in the past for Annex II activities have been redeveloped since, and often subdivided, especially when re-used for housing. This will increase the estimates for preliminary sampling and analysis, and for risk assessment. Member States are expected to conduct this sampling on every Annex II site regardless of any evidence as to the actual condition of the land, which may well not require such investigation. In the UK, we would expect this to have a significant adverse impact on the value of any property on such sites.

25. On Soil Status Reports (Article 12), costs associated with these are addressed in the report. However there are further potentially significant costs which are not covered, in the form of capital losses and information provision.

- The former represents costs to landowners where the reports identify minor concerns with the land, which would be expected to push down the value of the land. This effect is prolonged until a review of the inventory sees the site reviewed. Therefore, the more frequently such reviews are conducted, the less damage this requirement will have on land value. However, significant costs would be incurred with each review of the inventory.
- The latter represents processing costs for providing this information. A relevant comparator is the provision of existing water information by water companies to inform property transactions. The supply of this already existing and more modest information had an estimated market value in 2004 of £34m, based on an average cost of £42 per search.

26. The Impact Assessment does not consider the costs associated with funding the remediation of orphan sites (Article 13). Initial estimates suggest that this requirement could impose significant costs on Member States. For example,

the Commission estimate that of 100000 potentially contaminated sites in England, up to 50% may be orphan sites (p58). Of these, we would expect to have to remediate 5-20%, at an average cost (UK) of £1million<sup>2</sup> per site.

27. The Impact Assessment does not consider the costs associated with implementing a National Remediation Strategy (Art. 14). Within 7 years of transposition, Member States are required to implement their National Remediation Strategies, based on their inventory of contaminated sites. Given that the inventory is expected to take up to 25 years to implement (Art. 11), the National Remediation Strategy will not be able to paint a complete picture until the inventory is fully populated, leading to uncertainty amongst businesses who have developed plans based on existing legislation.

28. There may also be environmental costs associated with remediating contaminated sites which are not covered in the Impact Assessment. For example, some remediation techniques are energy (carbon) intensive. Where this is the case, it may be more sustainable to leave a site un-remediated.

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<sup>1</sup> See also paragraphs 1 – 3.

<sup>2</sup> Based on Defra contaminated land capital programme information



# **Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment**

## **Summary of the proposed EU Soil Framework Directive**

In September 2006 the European Commission adopted the Soil Thematic Strategy, including a proposal for a Soil Framework Directive. Defra have carried out an initial Regulatory Impact Assessment (RIA) of the proposal which indicates the potential for significant implementation and compliance costs.

The overall objective of the proposed Directive is to provide a framework for action by Member States, identifying threats to soil quality and resources and requiring measures to overcome identified issues.

The current proposal contains six main elements:

- i) Impact of policies (Article 3) - Member States would be required in the development of policies, from agriculture to transport, to address the impacts of policies likely to exacerbate or reduce soil degradation processes.
- ii) Impact of other activities (Article 4) - Member States would be required to ensure that land users whose actions might hamper significantly soil functions like biomass production, storing of nutrients and water, supporting biodiversity and acting as a carbon pool, take precautions to prevent or minimise the impact.
- iii) Soil sealing (Article 5) – Member States would be required to take appropriate measures to limit soil sealing (which is the permanent covering of the soil surface with an impermeable material such as concrete) or where it is carried out mitigate the effects through the use of appropriate construction techniques.
- iv) Identification of risk areas and development of a programme of measures (Article 6-8) – Member States would be required to:
  - identify risk areas with regard to soil erosion, loss of organic matter, compaction, salinisation and landslides; and
  - set risk reduction targets and draw up a programme of measures for reaching those targets. These measures would need to be cost-effective.
- v) Soil Contamination (Articles 9-14 and 23) – Member States would be required to:

- take appropriate action to prevent soil contamination (includes an amendment to the Environmental Liability Directive 2004/35);
- establish, using a detailed identification procedure, an inventory of contaminated sites;
- require sellers of land on which a potentially soil polluting activity has taken place to supply a soil status report;
- remediate all sites over a time period which they will need to set down; and
- set up mechanisms to fund remediation. The suggestion is that the costs are to be borne by the polluter but, where the polluter cannot be identified, costs are to be borne by the Member State.

vi) Awareness raising, reporting and exchange of information (Articles 15–17) – Member States would be required to raise awareness of the importance of soils, and also report back to the Commission on measures taken.

### **Initial Regulatory Impact Assessment**

Defra has carried out an initial analysis of the proposed Directive and prepared an initial Regulatory Impact Assessment (RIA) in relation to this. In broad terms our views are:

- We strongly support the aims set out in the Soil Thematic Strategy and we recognise the need to address the threats to our soil.
- We are concerned to ensure that any additional legislation in this field is introduced only if necessary and that it is proportionate to the risks. We have concerns about the Commission's rationale for proposing this Directive and the impact assessment has many weaknesses.
- Any new Directive must build on existing legislation at EU and national level. It must not duplicate and cause confusion and we have some concerns in this respect for example in relation to Articles 8 and 9.
- Member States should be allowed sufficient scope to decide on precise arrangements and to take into account existing soil protection measures. This is not always clear in the proposed Directive.
- Requirements should be risk-based and proportionate and we are concerned that some provisions especially in relation to preparing an inventory of contaminated land, the provisions will be very onerous to implement.
- Any proposal should be well drafted and clear to avoid disputes.



COMMISSION OF THE EUROPEAN COMMUNITIES

Brussels, 22.9.2006  
COM(2006) 232 final

2006/0086 (COD)

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**establishing a framework for the protection of soil and amending Directive 2004/35/EC**

(presented by the Commission)

## **EXPLANATORY MEMORANDUM**

### **1) CONTEXT OF THE PROPOSAL**

- **Grounds for and objectives of the proposal**

Soil is essentially a non-renewable resource and a very dynamic system which performs many functions and delivers services vital to human activities and ecosystems survival. Information available suggests that, over recent decades, there has been a significant increase of soil degradation processes, and there is evidence that they will further increase if no action is taken.

Though soil protection provisions exist in the Community *acquis*, there is no specific Community legislation on soil protection. The current proposal aims at filling this gap and has the objective of establishing a common strategy for the protection and sustainable use of soil based on the principles of integration of soil concerns into other policies, preservation of soil functions within the context of sustainable use, prevention of threats to soil and mitigation of their effects, as well as restoration of degraded soils to a level of functionality consistent at least with the current and approved future use.

- **General context**

Soil is under increasing environmental pressure across the Community, driven or exacerbated by human activity, such as inappropriate agricultural and forestry practices, industrial activities, tourism or urban development. These activities are damaging the capacity of soil to continue to perform in full its broad variety of crucial functions. Soil is a resource of common interest to the Community, although mainly private owned, and failure to protect it will undermine sustainability and long term competitiveness in Europe. Moreover, soil degradation has strong impacts on other areas of common interest to the Community, such as water, human health, climate change, nature and biodiversity protection, and food safety.

Decision No 1600/2002/EC laying down the Sixth Community Environment Action Programme includes the objective to protect natural resources and to promote a sustainable use of the soil. Therein the Community committed itself to the adoption of a Thematic Strategy on soil protection to halt and reverse soil degradation.

In its 2002 Communication "Towards a Thematic Strategy on Soil Protection" (COM(2002) 179), the Commission identified the main eight threats to which soils in the EU are confronted. These are erosion, organic matter decline, contamination, salinisation, compaction, soil biodiversity loss, sealing, landslides and flooding.

- **Existing provisions in the area of the proposal**

Soil has not, to date, been subject to a specific protection policy at Community level. Some soil protection aspects can be found scattered in the *acquis*, hence different Community policies can contribute to protect soil. This is the case of many provisions in the existing environmental Community legislation in areas such as water, waste, chemicals, industrial pollution prevention, nature protection and pesticides. Positive effects on the state of agricultural soils are also expected to result from the introduction of cross-compliance requirements related to the introduction of agricultural soil

protection aspects into the reformed Common Agricultural Policy and from the contribution of Rural Development. However, due to their different objectives and scopes, and to the fact that they often aim to safeguard other environmental media, existing provisions, even if fully implemented, yield a fragmented and incomplete protection to soil, as they do not cover all soils and all soil threats identified. Hence, soil degradation still continues.

- **Consistency with the other policies and objectives of the Union**

The proposed legislation, which aims at protecting soil and the preservation of the capacity of soil to perform its environmental, economic, social and cultural functions, is perfectly in line with the objectives of Article 174 of the EC Treaty. It takes account of the diversity of situations in the various regions of the Community. It is based on the precautionary principle and on the principles that preventive action should be taken, that environmental damage should as a priority be rectified at source and that the polluter should pay. It has been based on an analysis of the potential benefits and costs of action or lack of action as well as the respect of the economic and social development of the Community as a whole and the balanced development of its regions.

## 2) CONSULTATION OF INTERESTED PARTIES AND IMPACT ASSESSMENT

- **Consultation of interested parties**

### Consultation methods, main sectors targeted and general profile of respondents

The 2002 Communication was the subject of favourable conclusions by the other European Institutions which recognised that soil has a major role with respect to long term sustainability in the Community.

Starting February 2003 the Commission organised an open stakeholder consultation and established a very wide platform of more than 400 members divided in five Working Groups and an Advisory Forum with a steering role. In June 2004, the Working Groups finished their very thorough reports which included information on the state of soils in Europe, the pressures, the driving forces for soil degradation and a set of recommendations addressed to the Commission for the development of soil policy at Community level.

In November 2004, the Dutch Presidency of the Council and the Commission held a conference gathering Member States and participants of the stakeholder process who expressed strong support for a framework approach based on Community action.

The Commission carried out an Internet public consultation on possible elements to be included in the Thematic Strategy for Soil Protection for a period of eight weeks. The consultation gathered the replies of 1,206 citizens, 377 soil experts and 287 organisations coming from 25 countries.

### Summary of responses and how they have been taken into account

European citizens as well as soil experts and organisations majoritarily expressed the view that preventing and mitigating soil degradation in Europe is important or very

important, favoured action taken under the form of a framework adopted at Community level and concrete measures adopted at national or local level.

A comprehensive report on the statistical analysis of all questions, showing also the nationality distribution of respondents, and how the feedback has been taken into account is provided in the Impact Assessment.

Most of the recommendations from the Working Groups as well as concerns expressed in the Internet consultation have been taken on board. Abundant calls for mandatory restrictions on urban and touristic developments have not been endorsed as the Community has limited competences on restricting land use.

- **Collection and use of expertise**

Domains of scientific expertise concerned

Soil science, agronomical science, forestry, hydrology, biology, ecology, economy, social science, political science.

Methodology used

The proposal is based on the best available scientific and technical knowledge. Such expertise has been gathered through the very comprehensive stakeholder consultation and by contracting two independent studies to assess the socio-economical and environmental impacts of soil degradation as well as the environmental and socio-economical impacts of the measures proposed. The reports drafted by the Working Groups and published by the Commission, this proposal as well as the Impact Assessment reflect fully the results of this collection of expertise.

Main organisations/experts consulted

The consultation included national, regional and local administrations, industrial associations, trade organisations, environmental organisations, consumer organisations, science and research institutes, the European Environment Agency, the Joint Research Centre and other Commission services, unions, farmer organisations, land owner organisations as well as many other associations which had European coverage and expressed an interest in soil.

Summary of advice received and used

The existence of potentially serious risks with irreversible consequences has been mentioned. There is unanimity on the existence of such risks.

There was unanimous consensus that soil shall be guaranteed the same level of protection as provided to other environmental media, such as air or water, because soil functions are crucial for human and ecosystem survival. It was always highlighted that due to the enormous variability of soil across Europe, a "one-fits-all" approach could not be adopted as the basis for Community soil policy. Most expressed opinions advocated for a flexible system which would allow local specificities of soil and land use to be taken into account. Hence, there was a broad consensus that a framework should be adopted at European level establishing common objectives and principles,

leaving to Member States the adoption of detailed measures at the appropriate administrative and geographical level.

*Means used to make the expert advice publicly available*

The reports drafted by the Working Groups have been published by the OPOCE and are available free of charge also on Internet (<http://ec.europa.eu/comm/environment/soil/index.htm>). The same web site displays the replies to the public questionnaire from experts and organisations.

- **Impact assessment**

The following options, from less to more prescriptive, have been considered:

- (1) Member States are encouraged to take action under a general non-binding Community soil strategy.
- (2) A flexible legal instrument which would take the form of a Soil Framework Directive, ambitious in its scope but not overly prescriptive in its content.
- (3) Legislative proposals for the different soil threats, setting also all targets and means at Community level.

The Commission carried out an Impact Assessment, which is accessible on <http://ec.europa.eu/comm/environment/soil/index.htm>. It sets out in more detail the findings as regards the socio-economic and environmental impacts due to this proposal.

### **3) LEGAL ELEMENTS OF THE PROPOSAL**

- **Summary of the proposed action**

The proposed Directive includes:

- The establishment of a common framework to protect soil on the basis of the principles of preservation of soil functions, prevention of soil degradation, mitigation of its effects, restoration of degraded soils and integration in other sectoral policies.
- The requirement to identify, describe and assess the impact of some sectoral policies on soil degradation processes with a view to protect soil functions.
- The requirement for land users to take precautionary measures when their use of the soil can be expected to significantly hamper soil functions.
- An approach to soil sealing to ensure a more rational use of land in accordance with Article 174 of the EC Treaty and to maintain as many soil functions as possible.
- Identification of areas at risk of erosion, organic matter decline, salinisation, compaction and landslides, and establishment of national programmes of measures. The extent of the areas at risk of these threats need to be identified. To ensure a coherent and comparable approach, the identification of risk must be carried out on the basis of common elements. These elements include parameters which are known

to be driving forces for the different threat. Risk reduction targets and programmes of measures to reach those targets will have to be adopted. Programmes can build on standards and measures already identified and implemented in national and Community contexts.

- Measures to limit the introduction of dangerous substances into the soil, to avoid accumulation in soil that would hamper soil functions and create a risk to human health and the environment.
- Setting up an inventory of contaminated sites, a mechanism for funding the remediation of orphan sites, a soil status report, and establishing a national strategy for remediation of the contaminated sites identified. The definition of contaminated sites and a list of potentially soil polluting activities are established. These are the basis for locating the sites which can potentially be contaminated, as a preliminary step to the establishment of an inventory of effectively contaminated sites. This would be complemented by the obligation for seller or prospective buyer to provide a soil status report for any transaction of land where a potentially contaminating activity has taken or is taking place. A similar provision, concerning the energy performance of buildings, already exists in Community legislation (see Article 7 in Directive 2002/91/EC).

- **Legal basis**

The provisions of this Directive relate to environmental protection, and consequently the legal base chosen is Article 175(1) of the EC Treaty.

- **Subsidiarity principle**

The subsidiarity principle applies insofar as the proposal does not fall under the exclusive competence of the Community.

The objectives of the proposal cannot be sufficiently achieved by the Member States for the following reasons.

Soil degradation in one Member State or region can have transboundary consequences. Indeed, dams are blocked and infrastructure is damaged downstream by sediments massively eroded in another country farther upstream. Equally, groundwater bodies flowing through bordering nations can be polluted by contaminated sites on one side of the border. Losses of soil organic matter in one Member State can impair the achievement of the Kyoto protocol targets by the Community. This would imply that the costs to restore environmental quality are borne by a Member State different from that where the soil degrading practice occurred.

Wide differences between national soil protection regimes, in particular as regards soil contamination, can in some cases impose on economic operators very different obligations, thus creating an unbalanced situation for their fixed costs and a distortion of competition in the internal market.

Uptake by food and feed crops of contaminants in the soil may have an impact on the quality of products which are traded freely within the internal market posing a risk for human or animal health. Acting at source at Community level will complement the



quality controls performed at the national level to ensure food safety.

The health of European citizens can be impaired in different ways by soil degradation, some being the direct or indirect exposure to soil contaminants. Equally, casualties may occur in the event of landslides.

Community action will better achieve the objectives of the proposal for the following reasons.

Soil degradation affects other environmental areas for the protection of which Community legislation exists (e.g. water, nature, biodiversity, climate change). Community action on soil protection will close the gaps and ensure a consistent and efficient environmental quality protection across media. Soil protection contributes to ensure food safety and agricultural productivity on the long term, which underpins the Common Agriculture Policy funded by the Community. Having common principles to define what is considered to be a sustainable use of soil, will allow to articulate the research agendas at national and Community level and thus make a more efficient use of research and development funds to fill in the knowledge gaps.

The Community, by acquiring an ambitious and coherent framework which will translate in a better knowledge and management of soil, can play a leading role in the international arena, where other countries are in considerable need of transfer of know-how and technical assistance.

So far, without Community action to underpin the efforts, only nine Member States have specific legislation on soil protection, the others rely on some provisions preserving soil in different other policies. Most of the existing national provisions tackle the problem of soil contamination and, though the other threats are recognised, there is a lack of focus on a wider preservation of soil functions. The best indicator to demonstrate that this objective can be better achieved with a common Community action is that progress achieved in ensuring a sustainable use diverges enormously between Member States.

The proposal aims at achieving common principles, objectives and actions for all Member States to ensure a fair level playing field and to ensure that all Member States are tackling all threats to which soils are confronted in their national territory and do not address soil protection in a partial way.

The proposal therefore complies with the subsidiarity principle.

- **Proportionality principle**

The proposal complies with the proportionality principle for the following reasons.

The proposed instrument is a Directive establishing a framework for the protection of soil and the preservation of its functions. To ensure proportionality, much scope is left to the Member States to identify the most appropriate specific measures at the most appropriate geographical and administrative level. This is crucial to ensure that the regional and local specificities as regards soil variability, land uses, local climatological conditions and socio-economic aspects can be properly taken into account.

The level of intervention is to be decided by Member States, allowing for a more efficient use of their national administrative capabilities. Some additional and financial administrative obligations will arise, in particular for the Member States which have not tackled soil protection at national or regional level. Nevertheless, the environmental, economical and social benefits of the measures, as described in the Impact Assessment, outweigh significantly the costs incurred.

- **Choice of instruments**

Proposed instrument: framework directive.

Other means would not be adequate for the following reason.

A more prescriptive instrument, such as a regulation, would not allow taking into account the variability of soil and would not provide the flexibility needed to reflect local conditions. On the other hand, a non-binding instrument would not ensure the sustainable use of a common natural resource across Europe and would not prevent the distortion of competition caused by very diverging national regimes.

#### **4) BUDGETARY IMPLICATION**

The proposal has no implication for the Community budget.

#### **5) ADDITIONAL INFORMATION**

- **Review/revision/sunset clause**

The proposal includes a review clause.

- **Correlation table**

The Member States are required to communicate to the Commission the text of national provisions transposing the Directive as well as a correlation table between those provisions and this Directive.

- **European Economic Area**

The proposed act concerns an EEA matter and should therefore extend to the European Economic Area.

Proposal for a

**DIRECTIVE OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL**

**establishing a framework for the protection of soil and amending Directive 2004/35/EC**

(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty establishing the European Community, and in particular Article 175(1) thereof,

Having regard to the proposal from the Commission<sup>1</sup>,

Having regard to the opinion of the European Economic and Social Committee<sup>2</sup>,

Having regard to the opinion of the Committee of the Regions<sup>3</sup>,

Acting in accordance with the procedure laid down in Article 251 of the Treaty<sup>4</sup>,

Whereas:

- (1) Soil is essentially a non-renewable resource in that the degradation rates can be rapid whereas the formation and regeneration processes are extremely slow. It is a very dynamic system which performs many functions and delivers services vital to human activities and to the survival of ecosystems. These functions are biomass production, storing, filtering and transforming nutrients and water, hosting the biodiversity pool, acting as a platform for most human activities, providing raw materials, acting as a carbon pool and storing the geological and archeological heritage.
- (2) Soil degradation or soil improvements have a major impact on other areas of Community interest, such as surface water and groundwater protection, human health, climate change, protection of nature and biodiversity, and food safety.

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<sup>1</sup> [...]  
<sup>2</sup> [...]  
<sup>3</sup> [...]  
<sup>4</sup> [...]

- (3) Soil is a natural resource of common interest which is under increasing environmental pressure and is to be protected from degradation in its own right. Decision No 1600/2002/EC of the European Parliament and of the Council of 22 July 2002 laying down the Sixth Community Environment Action Programme<sup>5</sup> includes the objective of protecting natural resources and promoting a sustainable use of soil.
- (4) The Communication of the Commission to the European Parliament and the Council “Towards a Thematic Strategy on Soil Protection”<sup>6</sup> identifies the main eight soil degradation processes to which soils in the EU are confronted. These are erosion, organic matter decline, contamination, salinisation, compaction, soil biodiversity loss, sealing, landslides and flooding. The current scientific knowledge on soil biodiversity and its behaviour is too limited to allow for specific provisions in this Directive aiming at its protection. The prevention and mitigation of the effects of floods have been addressed by the proposal for a Directive of the European Parliament and the Council on the assessment and management of floods<sup>7</sup>.
- (5) Soil variability is very high in the Community and enormous differences exist in its structural, physical, chemical and biological state both within individual profiles and between soils. These diverse conditions and needs in the Community should be taken into account as they require different specific solutions for the identification of areas at risk, definition of targets and execution of appropriate measures to ensure protection of soil.
- (6) Community legislation, for instance in the fields of waste, chemicals, industrial pollution prevention and control, climate change, water, and agriculture and rural development, includes some provisions on soil protection, but these are neither designed nor sufficient to protect all soils against all degradation processes. Hence there is a need for a coherent and effective legislative framework, providing for common principles and objectives aiming at protection and sustainable use of soil in the Community.
- (7) Soil should be used in a sustainable manner which preserves its capacity to deliver ecological, economic and social services, while maintaining its functions so that future generations can meet their needs.
- (8) The aim of this Directive is to ensure the protection of soil, based on the principles of preservation of soil functions, prevention of soil degradation, mitigation of its effects, restoration of degraded soils and integration into other sectoral policies by establishing a common framework and actions.
- (9) A common framework is needed in order to articulate the efforts of Member States to improve the protection of soils and its sustainable use, to control the transboundary soil degradation effects, to protect aquatic and terrestrial ecosystems, and to preclude distortion of competition between economic operators.

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<sup>5</sup> OJ L 242, 10.9.2002, p. 1.

<sup>6</sup> COM(2002) 179.

<sup>7</sup> COM(2006) 15.

- (10) Since the objectives of the action to be taken, namely to establish a common framework for the protection of soil, cannot be sufficiently achieved by the Member States and can therefore be better achieved at Community level by reason of the scale of the problem and its implications in respect of other Community legislation on nature protection, water protection, food safety, climate change, agriculture and areas of common interest, such as human health protection, the Community may therefore adopt measures, in accordance with the principle of subsidiarity as set out in Article 5 of the Treaty. In accordance with the principle of proportionality, as set out in that Article, this Directive does not go beyond what is necessary in order to achieve that objective.
- (11) As some sectoral policies may either exacerbate or mitigate soil degradation processes, further integration of soil protection aspects into such policies is necessary. This Directive should make provision for Member States to identify and assess the impact of these policies on the prevention of soil degradation processes and the protection of soil functions.
- (12) In contrast to air and water, soil is mainly privately owned in the Community. Nevertheless it is a natural resource of common interest that has to be protected for future generations. In the public interest, therefore, land users should be required to take precautionary measures when their use of the soil can be expected to significantly hamper soil functions.
- (13) Sealing is becoming significantly more intense in the Community as a result of urban sprawl and increasing demand for land from many sectors of the economy, and this calls for a more sustainable use of soil. Appropriate measures are needed to limit soil sealing, for instance by rehabilitating brownfield sites, thus reducing the depletion of greenfield sites. Where sealing does occur Member States should provide for construction and drainage techniques that would allow as many soil functions as possible to be preserved.
- (14) A targeted and efficient soil protection policy should be based on the knowledge of where degradation is occurring. It is recognised that certain degradation processes, such as erosion, organic matter decline, compaction, salinisation and landslides, occur only in specific areas which are more at risk of such processes. This requires the identification of such risk areas.
- (15) To ensure a coherent and comparable approach in the different Member States, identification of risk areas for erosion, organic matter decline, compaction, salinisation and landslides should be based on a common methodology which includes elements known to be driving forces for the various degradation processes.
- (16) In the risk areas identified, measures should be taken to prevent further soil degradation by reducing the risk of it occurring and restoring degraded soils in order to preserve soil functions.
- (17) Action is to be taken under the responsibility of Member States, at the most appropriate level, based on the establishment of risk reduction targets and programmes of measures to reach those targets.

- (18) Such programmes of measures should take into account the social and economic impact of the measures envisaged; they should be reviewed periodically and may build on obligations, plans and programmes already set up under Community legislation or international agreements.
- (19) This Directive should contribute to halting desertification, which results from concurrent degradation processes, and soil biodiversity loss, and enhance cooperation in the implementation of the United Nations Convention to Combat Desertification and the Convention on Biological Diversity to which the Community is a party, and will enhance the implementation of these international environmental agreements.
- (20) In compliance with the prevention principle as laid down in Article 174 of the EC Treaty, this Directive should contribute to the prevention and reduction of the introduction of dangerous substances into soil to avoid soil contamination and to preserve soil functions.
- (21) Earlier industrialisation and poor or inappropriate management practices have left a legacy of hundreds of thousands of contaminated sites in the Community which call for a common strategy to manage historical contamination of soil in order to prevent and mitigate harmful effects on human health and the environment.
- (22) In order to successfully prevent and limit risk to human health and the environment stemming from soil contamination, Member States should identify the sites which according to their assessment are posing a significant risk in this regard. Given the number of sites which are likely to be contaminated, their identification requires a systematic step-by-step approach. To monitor progress on the identification of the contaminated sites a timetable is needed.
- (23) To support the identification of contaminated sites and to secure a common approach, it is necessary to establish a common list of activities which can have a significant potential to cause soil contamination. This common list of potentially soil polluting activities may be complemented by other more comprehensive lists adopted at national level.
- (24) The identification of contaminated sites should be reflected in a national inventory of contaminated sites to be updated regularly and made available for the public to consult. Previous and current efforts by Member States to identify contaminated sites should be taken into account.
- (25) In order to assist in the rapid identification of contaminated sites, the owner of a site where, according to official records such as national registers or cadastres, a soil-polluting activity has taken or is taking place, or the prospective buyer should, prior to completing the land transaction, provide relevant information on the status of the soil to the competent authority and to the other party in the transaction. The provision of such information at the time when a land transaction is being planned, will help to speed up the completion of the inventory of contaminated sites. It will also make the prospective buyer aware of the state of the soil and enable him to make an informed choice.

- (26) Taking into account the polluter pays principle, Member States should ensure that action is taken to remediate the contaminated sites identified within their national territory.
- (27) A National Remediation Strategy should be established, in particular for the purposes of setting remediation targets and the order of priority in which sites should be remediated.
- (28) In those contaminated sites where the polluter cannot be found, cannot be held liable for the pollution under national or Community legislation or cannot be made to bear the costs of remediation, also known as orphan sites, responsibility for reducing risk to human health and the environment should fall on the Member States. For those purposes, Member States should put in place specific funding mechanisms to ensure a durable financial source for the remediation of such sites.
- (29) Directive 2004/35/EC of the European Parliament and of the Council of 21 April 2004 on environmental liability with regard to the prevention and remedying of environmental damage<sup>8</sup> establishes that, for orphan sites, remedial action may be taken by the competent authority as a last resort. That Directive should therefore be amended in order to align it with the remediation obligations laid down in this Directive.
- (30) There is little public awareness of the importance of soil protection, and it is therefore necessary to introduce measures to improve knowledge, exchange of information and best practices.
- (31) The success of this Directive relies on close cooperation and coherent action at Community, Member State and local level as well as on information, consultation and involvement of the public, pursuant to Community obligations under the UNECE Aarhus Convention on Access to Information, Public Participation in Decision-making and Access to Justice in Environmental Matters. Thus, for the preparation, modification and review of the programmes of measures on risk areas and the National Remediation Strategies, it is appropriate to provide for the application of Directive 2003/35/EC of the European Parliament and of the Council of 26 May 2003 providing for public participation in respect of the drawing up of certain plans and programmes relating to the environment and amending with regard to public participation and access to justice Council Directives 85/337/EEC and 96/61/EC<sup>9</sup>.
- (32) It is recognised that different risk assessment methodologies for contaminated sites are currently being applied in Member States. In order to move towards a common approach ensuring neutral conditions of competition and a coherent soil protection regime, a thorough exchange of information is needed to establish the suitability of harmonising some of the elements of risk assessment as well as to further develop and improve the methodologies on eco-toxicological risk assessment.
- (33) Provision should be made to allow the rapid adaptation of methods of identification of risk areas in Member States including regularly reviewing the common elements therein.

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<sup>8</sup> OJ L 143, 30.4.2004, p. 56.

<sup>9</sup> OJ L 156, 25.6.2003, p. 17.

- (34) Provisions should be adopted as regards the data exchange formats and data quality criteria and these would need to be consistent with the establishment of any infrastructure for spatial information in the Community.
- (35) This Directive respects the fundamental rights and observes the principles recognised in particular by the Charter of Fundamental Rights of the European Union. In particular, this seeks to promote the integration into Community policies of a high level of environmental protection in accordance with the principle of sustainable development as laid down in Article 37 of the Charter of Fundamental Rights of the European Union.
- (36) The measures necessary for the implementation of this Directive should be adopted in accordance with Council Decision 1999/468/EC of 28 June 1999 laying down the procedures for the exercise of implementing powers conferred on the Commission<sup>10</sup>,

HAVE ADOPTED THIS DIRECTIVE:

## **Chapter I**

### **General provisions**

#### *Article 1*

#### *Subject-matter and scope*

1. This Directive establishes a framework for the protection of soil and the preservation of the capacity of soil to perform any of the following environmental, economic, social and cultural functions:
  - (a) biomass production, including in agriculture and forestry;
  - (b) storing, filtering and transforming nutrients, substances and water;
  - (c) biodiversity pool, such as habitats, species and genes;
  - (d) physical and cultural environment for humans and human activities;
  - (e) source of raw materials;
  - (f) acting as carbon pool;
  - (g) archive of geological and archeological heritage.

To that end, it lays down measures for the prevention of soil degradation processes, both occurring naturally and caused by a wide range of human activities, which undermine the capacity of a soil to perform those functions. Such measures include the mitigation of the effects of those processes, and the restoration and remediation

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<sup>10</sup> OJ L 184, 17.7.1999, p. 23. Decision as amended by Decision 2006/512/EC (OJ L 200, 22.7.2006, p. 11).



of degraded soils to a level of functionality consistent at least with the current and approved future use.

2. This Directive shall apply to soil forming the top layer of the earth's crust situated between the bedrock and the surface, excluding groundwater as defined in Article 2(2) of Directive 2000/60/EC of the European Parliament and of the Council<sup>11</sup>.

## *Article 2* *Definitions*

For the purposes of this Directive, the following definitions shall apply:

- (1) 'sealing' means the permanent covering of the soil surface with an impermeable material;
- (2) 'dangerous substances' means substances or preparations within the meaning of Council Directive 67/548/EC<sup>12</sup> and Directive 1999/45/EC of the European Parliament and of the Council<sup>13</sup>.

## *Article 3* *Integration*

In the development of sectoral policies likely to exacerbate or reduce soil degradation processes, Member States shall identify, describe and assess the impacts of such policies on these processes, in particular in the areas of regional and urban spatial planning, transport, energy, agriculture, rural development, forestry, raw material extraction, trade and industry, product policy, tourism, climate change, environment, nature and landscape.

Member States shall make public those findings.

## *Article 4* *Precautionary measures*

Member States shall ensure that any land user whose actions affect the soil in a way that can reasonably be expected to hamper significantly the soil functions referred to in Article 1(1) is obliged to take precautions to prevent or minimise such adverse effects.

## *Article 5* *Sealing*

For the purposes of preserving the soil functions referred to in Article 1(1), Member States shall take appropriate measures to limit sealing or, where sealing is to be carried out, to mitigate its effects in particular by the use of construction techniques and products which will allow as many of those functions as possible to be maintained.

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<sup>11</sup> OJ L 327, 22.12.2000, p. 1.

<sup>12</sup> OJ L 196, 16.8.1967, p. 1.

<sup>13</sup> OJ L 200, 30.7.1999, p. 1.

## **Chapter II**

### **Risk prevention, mitigation and restoration**

#### **SECTION ONE**

##### **IDENTIFICATION OF RISK AREAS**

###### *Article 6*

###### *Identification of risk areas of erosion, organic matter decline, compaction, salinisation and landslides*

1. Within five years from [transposition date], Member States shall identify the areas in their national territory, at the appropriate level, where there is decisive evidence, or legitimate grounds for suspicion, that one or more of the following soil degradation processes has occurred or is likely to occur in the near future, hereinafter “the risk areas”:
  - (a) erosion by water or wind;
  - (b) organic matter decline brought about by a steady downward trend in the organic fraction of the soil, excluding undecayed plant and animal residues, their partial decomposition products, and the soil biomass;
  - (c) compaction through an increase in bulk density and a decrease in soil porosity;
  - (e) salinisation through the accumulation in soil of soluble salts;
  - (f) landslides brought about by the down-slope, moderately rapid to rapid movement of masses of soil and rock material.

For the purposes of that identification, Member States shall, in respect of each of those soil degradation processes, use at least the elements listed in Annex I and shall take into account the effects of those processes in exacerbating greenhouse gas emissions and desertification.

2. The risk areas identified pursuant to paragraph 1 shall be made public and reviewed at least every ten years.

###### *Article 7*

###### *Methodology*

Member States may base the identification of risk areas on empirical evidence or on modelling. If modelling is used, the models must be validated by comparing the results on the basis of empirical data which have not been used for the development of the model itself.

**SECTION TWO**  
**ESTABLISHMENT OF TARGETS AND PROGRAMMES OF MEASURES**

*Article 8*

*Programmes of measures to combat erosion, organic matter decline, compaction, salinisation and landslides*

1. For the purposes of preserving the soil functions referred to in Article 1(1), Member States shall in respect of the risk areas identified in accordance with Article 6, draw up, at the appropriate level, a programme of measures including at least risk reduction targets, the appropriate measures for reaching those targets, a timetable for the implementation of those measures and an estimate of the allocation of private or public means for the funding of those measures.
2. When drawing up and revising the programmes of measures pursuant to paragraph 1, Member States shall give due consideration to the social and economic impacts of the measures envisaged.

Member States shall ensure that measures are cost-effective, technically feasible and shall carry out impact assessments, including cost-benefit analyses, prior to the introduction of the programmes of measures.

Member States shall indicate in their programmes of measures how the measures are to be implemented and how they will contribute to achievement of the environmental targets established.

3. Where an area is at risk from different concurrent soil degradation processes, Member States may adopt a single programme in which appropriate risk reduction targets are to be set for all the risks identified together with the appropriate measures for reaching those targets.
4. The programme of measures shall be drawn up within seven years from [transposition date] and shall be in application no later than eight years after that date.

The programme of measures shall be made public and shall be reviewed at least every five years.

## **Chapter III**

### **Soil contamination**

#### **SECTION ONE**

#### **PREVENTION AND INVENTORY**

##### *Article 9*

##### *Prevention of soil contamination*

For the purposes of preserving the soil functions referred to in Article 1(1), Member States shall take appropriate and proportionate measures to limit the intentional or unintentional introduction of dangerous substances on or in the soil, excluding those due to air deposition and those due to a natural phenomenon of exceptional, inevitable and irresistible character, in order to avoid accumulation that would hamper soil functions or give rise to significant risks to human health or the environment.

##### *Article 10*

##### *Inventory of contaminated sites*

1. Member States shall, in accordance with the procedure laid down in Article 11, identify the sites in their national territory where there is a confirmed presence, caused by man, of dangerous substances of such a level that Member States consider they pose a significant risk to human health or the environment, hereinafter “contaminated sites”.

That risk shall be evaluated taking into account current and approved future use of the land.

2. Member States shall establish a national inventory of contaminated sites, hereinafter “the inventory”. The inventory shall be made public and reviewed at least every five years.

##### *Article 11*

##### *Identification procedure*

1. Each Member State shall designate a competent authority to be responsible for the identification of contaminated sites.
2. Within five years from [transposition date], the competent authorities shall have identified the location of at least the sites where the potentially soil-polluting activities referred to in Annex II are taking place or have taken place in the past.

For those purposes, the activities referred to in point 2 of Annex II shall be considered independently of the thresholds specified in Annex I to Council Directive 96/61/EC<sup>14</sup>, except for the activities carried out by micro-enterprises, as defined in

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<sup>14</sup> OJ L 257, 10.10.1996, p. 26.

point 3 of Article 2 in the Annex to Commission Recommendation 2003/361/EC<sup>15</sup>, and those relative to the rearing of livestock.

The identification shall be reviewed at regular intervals.

3. In accordance with the following time-table, the competent authorities shall measure the concentration levels of dangerous substances in the sites identified in accordance with paragraph 2, and where the levels are such that there may be sufficient reasons to believe that they pose a significant risk to human health or the environment, an on-site risk assessment shall be carried out in relation to those sites:
  - (a) within five years from [transposition date], for at least 10% of the sites;
  - (b) within 15 years from [transposition date], for at least 60% of the sites;
  - (c) within 25 years from [transposition date], for the remaining sites.

## *Article 12*

### *Soil status report*

1. Where a site is to be sold on which a potentially polluting activity listed in Annex II is taking place, or for which the official records, such as national registers, show that it has taken place, Member States shall ensure that the owner of that site or the prospective buyer makes a soil status report available to the competent authority referred to in Article 11 and to the other party in the transaction.
2. The soil status report shall be issued by an authorised body or person appointed by the Member State. It shall include at least the following details:
  - (a) the background history of the site, as available from official records;
  - (b) a chemical analysis determining the concentration levels of the dangerous substances in the soil, limited to those substances that are linked to the potentially polluting activity on the site;
  - (c) the concentration levels at which there are sufficient reasons to believe that the dangerous substances concerned pose a significant risk to human health or to the environment.
3. Member States shall establish the methodology necessary for determining the concentration levels referred to in paragraph 2(b).
4. The information contained in the soil status report shall be used by the competent authorities for the purposes of identifying contaminated sites in accordance with Article 10(1).

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<sup>15</sup> OJ L 124, 20.5.2003, p. 36.

## **SECTION TWO REMEDATION**

### *Article 13 Remediation*

1. Member States shall ensure that the contaminated sites listed in their inventories are remediated.
2. Remediation shall consist of actions on the soil aimed at the removal, control, containment or reduction of contaminants so that the contaminated site, taking account of its current use and approved future use, no longer poses any significant risk to human health or the environment.
3. Member States shall set up appropriate mechanisms to fund the remediation of the contaminated sites for which, subject to the polluter pays principle, the person responsible for the pollution cannot be identified or cannot be held liable under Community or national legislation or may not be made to bear the costs of remediation.

### *Article 14 National Remediation Strategy*

1. Member States shall, on the basis of the inventory and within seven years from [transposition date], draw up a National Remediation Strategy, including at least remediation targets, a prioritisation, starting with those sites which pose a significant risk to human health, a timetable for implementation, and the funds allocated by the authorities responsible for budgetary decisions in the Member States in accordance with their national procedures.

Where containment or natural recovery are applied, the evolution of the risk to human health or the environment shall be monitored.

2. The National Remediation Strategy shall be in application and be made public no later than eight years after [transposition date]. It shall be reviewed at least every five years.

## **Chapter IV Awareness raising, reporting and exchange of information**

### *Article 15 Awareness raising and public participation*

1. Member States shall take appropriate measures to raise awareness about the importance of soil for human and ecosystem survival, and promote the transfer of knowledge and experience for a sustainable use of soil.

2. Article 2(1), (2), (3) and (5) of Directive 2003/35/EC shall apply to the preparation, modification and review of the programmes of measures on risk areas referred to in Article 8 and the National Remediation Strategies referred to in Article 14.

#### *Article 16* *Reporting*

1. Member States shall make the following information available to the Commission within eight years from [transposition date], and every five years thereafter:
  - (a) a summary of the initiatives taken pursuant to Article 5;
  - (b) the risk areas established pursuant to Article 6(1);
  - (c) the methodology used for risk identification pursuant to Article 7;
  - (d) the programmes of measures adopted pursuant to Article 8 as well as an assessment of the efficiency of the measures to reduce the risk and occurrence of soil degradation processes;
  - (e) the outcome of the identification pursuant to Article 11(2) and (3) and the inventory of contaminated sites established pursuant to Article 10(2);
  - (f) the National Remediation Strategy adopted pursuant to Article 14;
  - (g) a summary of the initiatives taken pursuant to Article 15 as regards awareness raising.
2. The information referred to in paragraph 1(b) shall be accompanied by metadata and shall be made available as documented digital georeferenced data in a format that can be read by a geographic information system (GIS).

#### *Article 17* *Exchange of information*

Within one year from [entry into force], the Commission shall set up a platform for the exchange of information between Member States and stakeholders on the risk area identification pursuant to Article 6 and on risk assessment methodologies for contaminated sites currently in use or under development.

### **Chapter V** **Final provisions**

#### *Article 18* *Implementation and adaptation to technical progress*

1. The Commission may, in accordance with the regulatory procedure with scrutiny referred to in Article 19(3), adapt Annex I to technical and scientific progress.

2. Where, on the basis of the exchange of information referred to in Article 17, a need to harmonise the risk assessment methodologies for soil contamination is identified, the Commission shall adopt common criteria for soil contamination risk assessment in accordance with the regulatory procedure with scrutiny referred to in Article 19(3).
3. Within four years after [date of entry into force], the Commission shall adopt, in accordance with the regulatory procedure referred to in Article 19(2), the necessary provisions on data and metadata quality, utilisation of historical data, methods, access, and data-exchange formats for the implementation of the provisions of Article 16.

*Article 19*  
*Committee*

1. The Commission shall be assisted by a committee, hereinafter “the Committee”.
2. Where reference is made to this paragraph, Articles 5 and 7 of Decision 1999/468/EC shall apply, having regard to the provisions of Article 8 thereof.  
  
The period laid down in Article 5(6) of Decision 1999/468/EC shall be set at three months.
3. Where reference is made to this paragraph, Article 5a, paragraphs 1 to 4 and Article 7 of Decision 1999/468/EC shall apply.
4. The Committee shall adopt its rules of procedure.

*Article 20*  
*Commission report*

1. The Commission shall publish a first evaluation report on the implementation of this Directive within two years of receiving the programmes of measures and National Remediation Strategies.  
  
The Commission shall publish further reports every five years thereafter.  
  
It shall submit the reports to the European Parliament and to the Council.
2. The reports provided for in paragraph 1 shall include a review of progress in the implementation of this Directive based on an assessments made by the Commission pursuant to Article 16.



*Article 21*  
*Review*

The Commission shall review this Directive at the latest [15 years after the date of entry into force] and shall, where appropriate, propose any necessary amendments.

*Article 22*  
*Penalties*

The Member States shall lay down the rules on penalties applicable to infringements of the national provisions adopted pursuant to this Directive and shall take all measures necessary to ensure that they are implemented. The penalties provided for must be effective, proportionate and dissuasive. The Member States shall notify those provisions to the Commission by the date specified in Article 24 at the latest and shall notify it without delay of any subsequent amendment affecting them.

*Article 23*  
*Amendment to Directive 2004/35/EC*

In Article 6 of Directive 2004/35/EC, paragraph 3 is replaced by the following:

“3. The competent authority shall require the remedial measures to be taken by the operator. Subject to Article 13(1) of Directive xx/xx/xx, if the operator fails to comply with the obligations laid down in paragraph 1 or 2(b), (c) or (d) of this Article, or cannot be identified or is not required to bear the costs under this Directive, those measures may be taken by the competent authority itself.”

*Article 24*  
*Transposition*

1. Member States shall bring into force the laws, regulations and administrative provisions necessary to comply with this Directive by [24 months after the date of entry into force] at the latest. They shall forthwith communicate to the Commission the text of those provisions and a correlation table between those provisions and this Directive.

When Member States adopt those provisions, they shall contain a reference to this Directive or be accompanied by such a reference on the occasion of their official publication. Member States shall determine how such reference is to be made.

2. Member States shall communicate to the Commission the text of the main provisions of national law which they adopt in the field covered by this Directive.

*Article 25*

*Entry into force*

This Directive shall enter into force on the twentieth day following that of its publication in the *Official Journal of the European Union*.

*Article 26*

*Addressees*

This Directive is addressed to the Member States.

Done at Brussels,

*For the European Parliament*  
*The President*

*For the Council*  
*The President*

## **ANNEX I**

SECTION 1	
COMMON ELEMENTS FOR THE IDENTIFICATION OF AREAS AT RISK OF EROSION	
Soil typological unit (STU) (soil type)	
Soil texture (STU level)	
Soil density, hydraulic properties (STU level)	
Topography, including slope gradient and slope length	
Land cover	
Land use (including land management, farming systems and forestry)	
Climate (including rainfall distribution and wind characteristics)	
Hydrological conditions	
Agro-ecological zone	

SECTION 2	
COMMON ELEMENTS FOR THE IDENTIFICATION OF AREAS AT RISK OF SOIL ORGANIC MATTER DECLINE	
Soil typological unit (STU) (soil type)	
Soil texture/clay content	
Soil organic carbon (total and humus concentration)	
Soil organic carbon (stock)	
Climate (including rainfall distribution and wind characteristics)	
Topography	
Land cover	
Land use (including land management, farming systems and forestry)	

SECTION 3	
COMMON ELEMENTS FOR THE IDENTIFICATION OF AREAS AT RISK OF COMPACTION	
Soil typological unit (STU) (soil type)	
Topsoil and subsoil texture (STU level)	
Topsoil and subsoil bulk density (STU level)	
Soil organic matter (STU level)	
Climate	
Land cover	
Land use (including land management, farming systems and forestry)	
Topography	

SECTION 4	
COMMON ELEMENTS FOR THE IDENTIFICATION OF AREAS AT RISK OF SALINISATION	
Soil typological unit (STU) (soil type)	
Soil texture (STU level)	
Soil hydraulic properties	
Irrigation areas, chemical properties of irrigated water and type of irrigation techniques	
Groundwater information	
Climate	

SECTION 5	
COMMON ELEMENTS FOR THE IDENTIFICATION OF AREAS AT RISK OF LANDSLIDES	
Soil typological unit (STU) (soil type)	
Occurrence/density of existing landslides	
Bedrock	
Topography	
Land cover	
Land use (including land management, farming systems and forestry)	
Climate	
Seismic risk	

**ANNEX II**  
**List of potentially soil polluting activities**

1. Establishments where dangerous substances are or were present in quantities equal to or in excess of the amounts indicated in Parts 1 and 2, column 2 of Annex I to Council Directive 96/82/EC (Seveso)<sup>16</sup>.
2. Activities listed in Annex I to Council Directive 96/61/EC.
3. Airports.
4. Ports.
5. Former military sites.
6. Petrol and filling stations.
7. Dry cleaners.
8. Mining installations not covered by Council Directive 96/82/EC, including extractive waste facilities as defined in Directive 2006/21/EC of the European Parliament and of the Council<sup>17</sup>.
9. Landfills of waste as defined in Council Directive 1999/31/EC<sup>18</sup>.
10. Waste water treatment installations.
11. Pipelines for the transport of dangerous substances.

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<sup>16</sup> OJ L 10, 14.1.1997, p. 13.

<sup>17</sup> OJ L 102, 11.4.2006, p. 15.

<sup>18</sup> OJ L 182, 16.7.1999, p. 1.



# **Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment**

## **List of Consultees**

Aberdeen City Council  
Aberdeen University  
Aberdeenshire Council  
Action of Churches Together in Scotland  
ADAS Scotland  
Angus Council  
Argyll & Bute Council  
Association for the Protection of Rural Scotland  
Association of Salmon Fishery Boards  
Association of Scottish Community Councils  
Assured Chicken Production  
Bio-Dynamic Agricultural Association  
Borders Machinery Ring Ltd  
British Geological Survey Scotland  
British Leather Confederation  
British Potato Council  
British Poultry Council  
British Trout Association/Scot Trout  
British Waterways  
Catholic Parliamentary Office  
Central Scotland Anglers Association  
Centre for Ecology and Hydrology - Edinburgh  
Centre for Environment and Business in Scotland  
Chartered Institute of Water & Env Management  
Church of Scotland  
Church of Scotland General Trustees  
Church of Scotland Offices  
Citizen Advice Scotland  
City of Edinburgh Council  
Clackmannanshire Council  
Clerk of the Environment and Rural Affairs Committee  
Comhairle Nan Eilean Siar  
Commission for Racial Equality  
Communities Scotland  
Confederation of British Industry (CBI Scotland)  
Convention of Scottish Local Authorities (COSLA)  
Council for Scottish Archaeology  
Crofters Commission  
Deer Commission  
Departmental Committee Liaison Officer  
Disability Rights Commission  
Dumfries & Galloway Council  
Dundee City Council  
East Ayrshire Council  
East Dunbartonshire Council

East Lothian Council  
East Renfrewshire Council  
Edinburgh University  
Entec Environmental and Engineering Consultants  
Enviro Centre  
Environment and Rural Development Committee  
Environment Link Scotland  
Environmental Reclamation Services Ltd  
Environmental Research Institute  
Enviros  
Equal Opportunities Commission  
Evangelical Alliance (Scotland)  
Faculty of Advocates  
Falkirk Council  
Farming & Wildlife Advisory Group  
Federation of Small Businesses (Scotland)  
FEED (NE Farmers Ltd)  
Fife Council  
Fisheries Committee  
Food Standards Agency Scotland  
Forest Industries  
Forestry Commission Scotland  
Formative Partnership  
Friends of the Earth Scotland  
General Assembly  
Glasgow City Council  
Greenspace Scotland  
GSK Montrose  
HBS Ring Ltd  
Health & Safety Executive  
Health Protection Scotland  
Health, Safety & Environment Co-ordination Manager  
Highland Council  
Highlands & Islands Enterprise  
Historic Scotland  
I & H Brown LTD  
Institute of Auctioneers & Appraisers in Scotland  
Institute of Fisheries Management  
Inverclyde Council  
Jacobs Babbie  
John Muir Trust  
Joint Nature Conservation Committee  
Keep Scotland Beautiful  
Land Use Consultants  
Lands Tribunal for Scotland  
Law Society of Scotland  
Link Parliamentary Office  
Lothian & Borders Business Environment Initiative  
Lothian & Edinburgh Environmental Partnership  
Lothian Machinery Ring Ltd

Macaulay Land Use Research Institute  
Malt Distillers Association of Scotland  
Marine Conservation Society  
Midlothian Council  
Moray Council  
National Farmers Union Scotland  
National Sheep Association  
National Society for Clean Air Scotland  
National Trust of Scotland  
North Ayrshire Council  
North Lanarkshire Council  
Orkney Islands Council  
Paisley University  
Perth & Kinross Council  
Quality Meat Scotland  
Quality Trout UK  
Renfrewshire Council  
Renfrewshire Environmental Trust  
Royal Commission on the Ancient and Historic Monuments of Scotland  
Royal Environmental Health Institute of Scotland (REHIS)  
Royal Institute of Public Health and Hygiene  
Royal Institution of Chartered Surveyors  
Royal Society for the Protection of Birds (Scotland)  
Rural Forum Scotland  
Rural Services Scotland Ltd  
RuralScotland  
Scotch Malt Whisky Society  
Scotch Whisky Association  
Scotch Whisky Distilling Environment Committee  
Scotland and Northern Ireland Forum for Environmental Research (SNIFFER)  
Scottish Agricultural College  
Scottish Agricultural Organisation Society Ltd  
Scottish Agronomy Research Ltd  
Scottish Alliance for Geoscience, Environment and Society  
Scottish Anglers National Association  
Scottish Aquaculture  
Scottish Association of Meat Wholsalers  
Scottish Borders Council  
Scottish Business in the Community  
Scottish Chambers of Commerce  
Scottish Churches Parliamentary Office  
Scottish Coastal Forum  
Scottish Conservatives  
Scottish Contractors Association  
Scottish Council for Development and Industry  
Scottish Council for National Parks  
Scottish Countryside Activities Council  
Scottish Countryside Rangers Association  
Scottish Crofting Foundation  
Scottish Crop Research Institute

Scottish Enterprise  
Scottish Environment Link  
Scottish Environment Protection Agency (SEPA)  
Scottish Environmental Industries Association  
Scottish Environmental Services Association (SESA)  
Scottish Executive  
Scottish Executive Library  
Scottish Food & Drink Federation  
Scottish Freshwater Fisheries Forum  
Scottish Green Party  
Scottish Inter Faith Council  
Scottish Labour Party  
Scottish Land Court  
Scottish Law Commission  
Scottish Liberal Democrats  
Scottish MEPs  
Scottish Milk Forum  
Scottish Nationalist Party  
Scottish Native Woods  
Scottish Natural Heritage (SNH)  
Scottish Organic Producers Association  
Scottish Pollution Control Co-ordinating Committee  
Scottish Potato Trade Association  
Scottish Quality Cereals  
Scottish Quality Salmon  
Scottish Rural Property and Business Association  
Scottish Salmon Growers Association  
Scottish Scenic Trust  
Scottish Socialist party  
Scottish Soft Fruit Growers  
Scottish Tanning Industries Ltd  
Scottish Trade Union Congress (STUC)  
Scottish Universities Environmental Research Centre  
Scottish Water  
Scottish Wildlife Trust  
Scottish Woodlands  
Shetland Islands Council  
Soil Association Scotland  
Soilutions Ltd  
South Ayrshire Council  
South Lanarkshire Council  
South West Machinery Ring  
SPICe library  
St Columba's Episcopal Church  
Stirling Council  
Stirling University  
Sustainable Communities  
Sustainable Development Commission  
Sustainable Development Research Centre  
Sustainable Scotland Network

Tay Forth Machinery Ring  
Textile Services Association  
The Scottish Chambers of Commerce  
The Scottish Parliament  
UDV Distilling Ltd  
VTSC Growers Association  
Waste and Resources Action Programme (WRAP)  
West Dunbartonshire Council  
West Lothian Council  
Wildfowl & Wetlands Trust  
Women's Farming Union  
Woodland Trust  
World Wildlife Fund Scotland  
WSP Environmental Ltd  
WWF Scotland

**RESPONDENT INFORMATION FORM:** Consultation on the proposed EU Soil Framework Directive and initial Regulatory Impact Assessment

Please complete the details below and return it with your response. This will help ensure we handle your response appropriately. Thank you for your help.

Name:

Postal Address:

1. Are you responding: (please tick one box)
- (a) as an individual ☐ go to Q2a/b and then Q4
- (b) **on behalf of** a group/organisation ☐ go to Q3 and then Q4

**INDIVIDUALS**

- 2a. Do you agree to your response being made available to the public (in Scottish Executive library and/or on the Scottish Executive website)?

Yes (go to 2b below) ☐

No, not at all ☐ We will treat your response as confidential

- 2b. Where *confidentiality is not requested*, we will make your response available to the public on the following basis (**please tick one** of the following boxes)**

Yes, make my response, name and address all available ☐

Yes, make my response available, but not my name or address ☐

Yes, make my response and name available, but not my address ☐

**ON BEHALF OF GROUPS OR ORGANISATIONS:**

- 3 The name and address of your organisation **will be** made available to the public (in the Scottish Executive library and/or on the Scottish Executive website). Are you also content for your **response** to be made available?

Yes ☐

No ☐ We will treat your response as confidential

**SHARING RESPONSES/FUTURE ENGAGEMENT**

- 4 We will share your response internally with other Scottish Executive policy teams who may be addressing the issues you discuss. They may wish to contact you again in the future, but we require your permission to do so. Are you content for the Scottish Executive to contact you again in the future in relation to this consultation response?

Yes ☐

No ☐

## THE SCOTTISH EXECUTIVE CONSULTATION PROCESS

Consultation is an essential and important aspect of Scottish Executive working methods. Given the wide-ranging areas of work of the Scottish Executive, there are many varied types of consultation. However, in general, Scottish Executive consultation exercises aim to provide opportunities for all those who wish to express their opinions on a proposed area of work to do so in ways which will inform and enhance that work.

The Scottish Executive encourages consultation that is thorough, effective and appropriate to the issue under consideration and the nature of the target audience. Consultation exercises take account of a wide range of factors, and no two exercises are likely to be the same.

Typically Scottish Executive consultations involve a written paper inviting answers to specific questions or more general views about the material presented. Written papers are distributed to organisations and individuals with an interest in the issue, and they are also placed on the Scottish Executive web site enabling a wider audience to access the paper and submit their responses<sup>1</sup>. Consultation exercises may also involve seeking views in a number of different ways, such as through public meetings, focus groups or questionnaire exercises. Copies of all the written responses received to a consultation exercise (except those where the individual or organisation requested confidentiality) are placed in the Scottish Executive library at Saughton House, Edinburgh (K Spur, Saughton House, Broomhouse Drive, Edinburgh, EH11 3XD, telephone 0131 244 4565).

All Scottish Executive consultation papers and related publications (eg, analysis of response reports) can be accessed at: [Scottish Executive consultations](http://www.scotland.gov.uk/consultations) (<http://www.scotland.gov.uk/consultations>)

The views and suggestions detailed in consultation responses are analysed and used as part of the decision making process, along with a range of other available information and evidence. Depending on the nature of the consultation exercise the responses received may:

- indicate the need for policy development or review
- inform the development of a particular policy
- help decisions to be made between alternative policy proposals
- be used to finalise legislation before it is implemented

Final decisions on the issues under consideration will also take account of a range of other factors, including other available information and research evidence.

**While details of particular circumstances described in a response to a consultation exercise may usefully inform the policy process, consultation exercises cannot address individual concerns and comments, which should be directed to the relevant public body.**

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<sup>1</sup> <http://www.scotland.gov.uk/consultations>