

SEPA POSITION STATEMENT ON LAND PROTECTION (Reference EP 054)

This document is a statement of SEPA'S role and position on land protection. The intended audience is external stakeholders and also SEPA staff involved with developing and implementing policy. This Statement updates and replaces Environmental Policy (EP) Number 054 titled Land Protection Policy (2003).

This Statement clarifies how we intend to engage with land-related issues to support the priorities of the Scottish Government. This position adopts an integrated approach to implementation by making links between legislation and the wide range of strategies, frameworks and plans relating to land protection, in order to achieve environmental objectives for land, water, climate change, biodiversity and human health. This document sets out specific land protection aims to take into account SEPA's legislative and policy duties to protect land.

SEPA fully supports and adopts the vision for land as set out in the Scottish Government's Land Use Strategy (LUS). This vision is "*A Scotland where we fully recognise, understand and value the importance of our land resources, and where our plans and decisions about land use deliver improved and enduring benefits, enhancing the wellbeing of our nation*".

1. Introduction

- 1.1 SEPA's mission is to be an excellent environmental regulator and an effective and influential authority on the environment. SEPA protects and improves the environment, including land in a number of ways. This includes helping customers to understand and comply with environmental regulations and to realise the many economic benefits of good environmental practice. SEPA also provide expert advice on land issues and delivers a wide range of guidance and information services.
- 1.2 SEPA aims to ensure a balanced approach to the protection and improvement of the environment, considering land alongside air and water, in its contribution to the goal of sustainable development. This is a vital component of the Government's overall purpose of increasing sustainable economic growth.
- 1.3 Although there is legislation relating to specific elements of land protection, there is no single piece of legislation which offers overarching protection to land and soils. As the protection of land has the potential to also interact and protect both the water and air environment, an integrated and inter-disciplinary approach to environmental protection is required, as shown by Figure 1.
- 1.4 The aim of this position statement is therefore to outline SEPA's role, responsibilities and objectives in relation to land protection and thus its contributions to sustainable land use and improvement, maintenance and restoration of land quality.

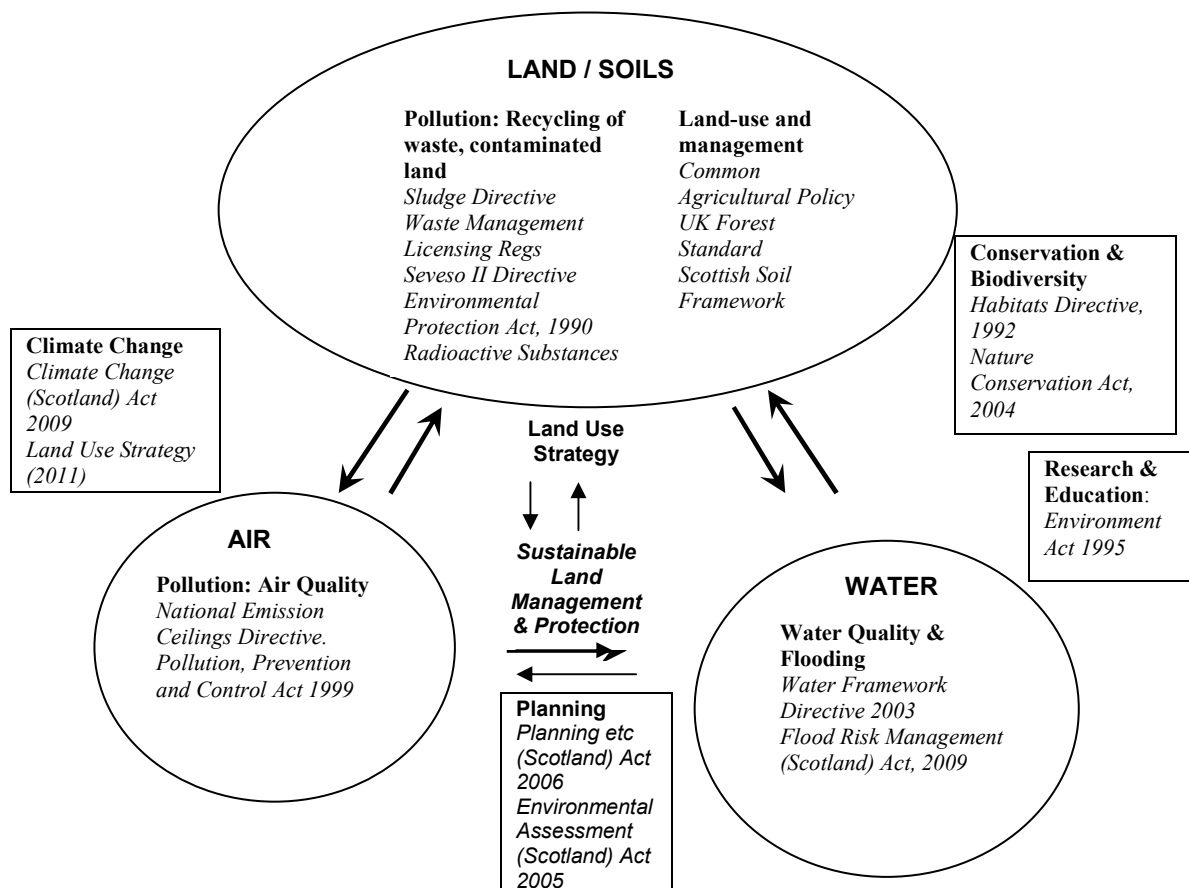


Figure 1: Policy drivers for sustainable land use management and land protection across the land, air and water environment. Drivers within the circles generally illustrate interaction direct levels of control over the quality of land, air or water. The arrows in between the inner circles indicate indirect levels of control to land and illustrate how drivers interact between media. Drivers placed within the boxes apply to the wider environment.

2. Definitions and aims of land protection

- 2.1 Land is a vital part of the “environment”, as defined by the Environmental Protection Act 1990, but its value is often overlooked or underestimated. Land is defined here as comprising of soil, geology, landforms, habitats and species and the terrestrial ecosystems¹ of which they form part.
- 2.2 Land quality is defined by its ability to sustain and fulfil a variety of different functions which range from growing food, to controlling and regulating environmental interactions, storing carbon, providing valued habitats and sustaining biodiversity.
- 2.3 The way in which land and soil is used and managed, and the influence of human activities on it, can present threats to its quality. Industrial activities, tourism, construction and urban development and poorly managed agricultural and forestry practices can all impact on land quality, either directly or indirectly.
- 2.4 SEPA’s main aim for land protection is to protect land quality in order to achieve our environmental objectives for land, soil, water, climate change, biodiversity, and human health. By protecting land quality, SEPA may also help protect ecosystem services which are vital for human health and well-being (Appendix 4).

¹ Terrestrial ecosystem: system formed by the interaction of a community of organisms with their physical environment on land.

- 2.5 Measures to safeguard land quality play a very important role in meeting multiple environmental objectives. Measures to target source pollution pathways on land will help to protect groundwater, surface waters, and wetlands from the effects of diffuse pollution.

3 Land Use Strategy

- 3.1 The *Land Use Strategy* (LUS) is a strategic framework which brings together proposals for getting the best from Scotland's land resources. The LUS sets the long-term directions that Scotland needs to pursue to get the best from our land and to contribute to a more prosperous and successful nation.

LUS:

- sets out a new Vision to guide our thinking about the use of land;
 - identifies three objectives relating to the economy, environment and communities - the three pillars of sustainability;
 - provides a set of ten Principles for Sustainable Land Use to guide policy and decision making;
 - builds on the Government's current activities and includes a further 13 Proposals to help meet the objectives;
 - sets a high-level, long-term agenda which takes a broad view of the wellbeing and future needs of Scotland's land and people;
 - provides a context for all decisions about land use, including those subject to the statutory planning system - in line with Scottish Planning Policy and the National Planning Framework;
 - Does not set out to provide a blueprint for how individual areas of land should be used - but does highlight what needs to change in our policies and our behaviours to achieve our goals.
- 3.2 SEPA fully supports and adopts the vision for land as set out in the LUS (see page 1) and the LUS objectives of:
- Land-based businesses working with nature to contribute more to Scotland's prosperity;
 - Responsible stewardship of Scotland's natural resources delivering more benefits to Scotland's people;
 - Urban and rural communities better connected to the land, with more people enjoying the land and positively influencing land use.
- 3.3 Thirteen proposals are listed in the Scottish Government's Land Use Strategy and will be taken forward by SG and fully supported by SEPA as required by SGov. The Land Use Strategy *Action Plan* sets out how the 13 Proposals in the Land Use Strategy will be taken forward, including SEPA's role. SEPA will have regard to the Ten Principles given in the Land Use Strategy when making plans and taking significant decisions affecting land use. These Principles are listed in Appendix 1 and the five Principles with the most direct relevance to SEPA's remit are also highlighted.

4. SEPA's Land Protection objectives

- 4.1 The following objectives take into account SEPA's legislative and policy duties to protect land:

- have regard to the Ten Principles given in the Scottish Government's Land Use Strategy when making plans and taking significant decisions affecting land use;
- use the principles of Better Regulation to regulate, inspect and monitor industrial and land based activities to prevent land and soil pollution, to the best effect;
- contribute to and promote the sustainable management and protection of land and soils through regulation; supporting the development of policies, raising awareness and strategic action;
- make links between soil management and water protection measures to ensure maximum benefit for both soil/land and water quality;
- in exercising its functions take steps to mitigate and adapt to climate change, flooding and further the conservation of biodiversity where this is consistent with the proper exercise of our functions;
- contribute to a greater understanding of Scotland's land environment by reporting on its state; monitoring, assessing and communicating the impacts of pressures on land and assessing the effectiveness of control measures;
- seek to engage and work in partnership with Scottish Government, stakeholders and the general public to deliver an efficient and effective and co-ordinated approach to land protection;
- endeavour to contribute to the sustainable management and protection of Scotland's land resources;
- promote restoration and remediation of land where there is a statutory duty to do so.

5. Mechanisms for implementation

- 5.1 The mechanisms that SEPA will use to deliver the commitments and aims in this position statement include:
- Carrying out statutory duties via policy and regulation ;
 - Being an influential authority on the land environment by providing focused advice underpinned by sound science, as well as education and raising awareness and partnership working;
 - Reporting, monitoring and assessment;
 - Research and development and knowledge exchange.
- 5.2 Regulation is one of the key mechanisms through which SEPA protects land. SEPA is responsible for setting standards in environmental licenses which protect and help improve land quality and the services that land provides. The main regulatory regimes which offer direct control and direct protection over land are listed in Appendix 2. Land is also subject to many frameworks, strategies, programmes and plans which contribute to the delivery of land protection (Appendix 3).
- 5.3 SEPA promotes the adoption of good practice through dialogue, and by working in partnership with others to achieve environmental improvements. Initiatives include national awareness-raising campaigns on diffuse pollution, working with farmers in priority catchments, trial catchment projects,

demonstration farms and delivery of on-site advice to ensure that good practice is adopted. There are a wide range of task or stakeholder groups through which SEPA will continue to engage with other organisations to contribute to land protection.

6. Policy drivers and responsibilities

- 6.1 There are many policy drivers which contribute to the protection of land (Figure 1) and under each of these drivers, SEPA has statutory duties and powers and also non-statutory responsibilities. SEPA also has a duty under Section 32 of the Environment Act 1995 to use our powers to prevent / minimise or remedy / mitigate the effects of pollution of the environment including land.
- 6.2 The level of protection given to land in this position statement refers to the level defined in the Environmental Protection Act, 1990 and the Pollution Prevention and Control (PPC) Act 1999 where “*pollution of the environment*” is pollution that causes “*harm*” to man or other living organisms. “Harm” is defined as including harm to the health of living organisms or interference with their ecological systems (section 29). In PPC, environmental pollution means pollution which causes harm. Harm includes both harm to land, harm to living organisms and harm to ecological systems of which living organisms form part.

Soil

- 6.3 The Scottish Government’s *Scottish Soil Framework* pulls together policy drivers for soil, including the EU *Soil Thematic Strategy* (COM(2006) 231) and a proposal for a Soil Framework Directive which set out common principles for protecting soils across the EU. The main aim of the Scottish Soil Framework is to promote the sustainable management and protection of soils consistent with the economic, social and environmental needs of Scotland. The Framework identifies 13 Soil Outcomes and a range of actions required to achieve these Outcomes. SEPA is identified as one of the lead organisations responsible for the achievement of many of these actions.
- 6.4 The greatest threats to Scotland’s soils at a national scale include climate change and loss of organic matter. Sealing, acidification and eutrophication and loss of biodiversity also pose significant threats. At a local level, historic land contamination, erosion and compaction may also represent serious threats to soil function including detrimental effects to water quality. These threats also impact on land quality as a whole, and cause habitat degradation.
- 6.5 Appropriate soil management will increase the soil’s capability to absorb water and thus reduce the risk of flooding. Good management will ensure that soils retain their carbon content and ensure that they do not become a source of greenhouse gases. Reducing threats to land quality can also improve the overall resilience of land to climate change.
- 6.6 Although soils are a continually evolving, living and dynamic medium responding to external pressures and management, some activities such as development or pollution can mean their recovery or reformation cannot take place within human timescales. SEPA therefore consider soils to be a finite and essentially non-renewable resource.

- 6.7 Peatlands in particular are a prominent and distinctive part of Scotland's landscapes. They provide many ecosystem services - economic, environmental and cultural - providing important habitats for much of our most valued wildlife and containing large amounts of carbon. For windfarm developments on peat (Electricity Act 1989, Section 36 applications), developers will be expected to use the *updated carbon calculator* to assess the carbon impact of their proposed development. SEPA will validate these carbon balance calculations.
- 6.8 SEPA will support plans for the restoration of damaged peatlands where restoration can be expected to achieve multiple ecosystem benefits.

Pollution - recycling and disposal of waste on land

- 6.9 Waste Management Licenses are granted by SEPA under Part II of the Environmental Protection (EPA) 1990 Act for activities including the treatment, keeping or disposal of waste in or on land. Waste must be recovered or disposed of without using processes or methods which could harm the environment including land and in particular without risk to water, air, plants or animals. The 'environment' is defined as consisting of all or any of the media of land, water and the air. 'Land' is defined as including land covered by waters where the land is above the low water mark of ordinary spring tides.
- 6.10 In the application of waste to land, it is necessary to demonstrate that this will result in 'ecological benefit' or 'agricultural benefit' and not adversely affect the soil or waterbodies. In the keeping or treating of waste and for old closed landfills, SEPA will not accept surrender of a site licence if the condition of land is such that it is likely to cause pollution or harm to the environment; this includes soil contamination. If harm is caused, the operator must carry out remediation. There are also provisions in the PPC Regulations requiring SEPA to accept an application for a surrender only where the operator can show that it has taken steps to avoid any pollution risks from the operation of the installation and that it has taken steps to return the site to a satisfactory state.
- 6.11 Sewage sludge use in agriculture is governed by the Sewage Sludge Directive (86/278/ EEC) which has been transposed into national legislation through the Sludge (Use in Agriculture) Regulations 1989 (as amended), complemented by a Code of Practice for Agricultural Use of Sewage Sludge (1996). It seeks to control the use of sewage sludge in agriculture and to regulate its use in such a way as to prevent harmful effects on soil, vegetation, animals, and humans. SEPA are responsible for enforcing the Regulations in Scotland with powers to conduct field inspections and to audit any aspect of the operation under the Regulations.
- 6.12 The aim of the Landfill Directive (99/31/EC) is to provide for measures, procedures, and guidance to prevent or reduce as far as possible negative effects on the environment. It is implemented by way of stringent operational and technical requirements on the waste and landfills.
- 6.13 The Landfill (Scotland) Regulations 2003 implement the Landfill Directive in Scotland and the operation of landfills requires a PPC permit issued by SEPA. These Regulations stipulate certain conditions to be included in landfill permits. Schedule 3 of the Regulations includes the general condition that applies to all landfills that it must be situated and designed so as to 'provide the conditions for prevention of pollution of the soil, groundwater, or surface

water.’ The Regulations also place a duty on SEPA to ensure that the location chosen for a landfill takes account of any nature protection zones (such as Special Areas of Conservation and Special Protection Areas) and the protection of natural heritage. As such permits are issued under the PPC (Scotland) Regulations 2000 (Reg.8 of the Landfill Regulations 2003) the definitions contained in those regulations will apply to the terms used in the permits.

- 6.14 SEPA is the enforcing authority under the Radioactive Substances Act, 1993, and, as such, regulates the accumulation and disposal of radioactive waste and the keeping and use of radioactive material. There are limits which apply to the doses received by humans from these radioactive substances activities; SEPA also has to ensure that any doses are kept as low as reasonably achievable. This includes assessing if proposed permitted activities would lead to pollution of the land environment.

Pollution - contaminated land

- 6.15 Part IIA of the Environmental Protection Act 1990, The Contaminated Land (Scotland) Regulations 2000 (revised 2005) and associated Statutory Guidance places a number of duties and powers on SEPA in relation to Contaminated Land. Whilst the Local Authorities are the lead regulator for the Part IIA regime, SEPA has a duty to act as the enforcing authority for particular categories of contaminated land termed as ‘special sites’. It is also the enforcing authority for radioactively contaminated land and has duties to investigate potentially radioactively contaminated sites. In addition SEPA must maintain a public register for special sites and radioactive contaminated land and prepare a national report on the state of contaminated land at the request of the Scottish Government. SEPA has powers to recover the cost for remediation undertaken by itself, and to provide site specific advice to local authorities.

- 6.16 The Seveso II Directive is aimed at the prevention of major accidents which involve dangerous substances and the limitations of their consequences for man and the environment which includes land. This is enforced in Scotland by the Control of Major Accident Hazards Regulations 1999 (COMAH) which are made under the Health and Safety at Work Act 1974. SEPA with the Health and Safety Executive (HSE) must ensure that appropriate measures are in place to protect the environment (including soil) in the event of major accidents, and that clean up and restoration is proportionate to the level of harm and risk of continuing harm.

- 6.17 The Environmental Liability Regulations (Scotland) 2009 can be seen as an application of the ‘polluter pays principle’. The legislation places an obligation on operators of certain activities to take preventative measures where there is an imminent threat of environmental damage and remediate any environmental damage caused by their activities. This legislation relates to certain categories of environmental damage caused in the present. This is in contrast to the contaminated land regime which deals with historic contamination. SEPA is the competent authority for two of the three categories of ‘environmental damage’ identified in the regulations: ‘Land Damage’ and ‘Water Damage’.

Pollution - air quality

- 6.18 The National Emissions Ceiling Regulations (2002) offers indirect protection of land through controls on mass emissions of sulphur dioxide (SO₂), nitrogen

oxides (NO_x), ammonia (NH₃) and volatile organic compounds (VOCs), with the aim of reducing atmospheric deposition of nutrients and acidifying compounds, thereby reducing consequent eutrophication and acidification. Critical levels of SO₂ and NO_x are contained within the Air Quality Standards (Scotland) Regulations 2010; target values ozone (O₃) for the protection of vegetation are also provided in these Regulations.

- 6.19 SEPA has a statutory duty under the Environment Act (1995) and the Pollution, Prevention and Control (PPC) regulatory regime, to consider the possible impacts on land when issuing emission permits for process industry installations to prevent deterioration of sensitive habitats and to minimise the effects of pollution on the environment as a whole.

Conservation and Biodiversity

- 6.20 SEPA has a statutory duty in exercising its functions; to further the conservation of biodiversity in so far as is consistent with the proper exercise of those functions, as stated in the Nature Conservation (Scotland) Act 2004. In complying with this duty, SEPA must have regard to the Scottish Biodiversity Strategy which presents a 25 year vision and framework for action to protect Scotland's biodiversity and maintain healthy and productive ecosystems. The Scottish Biodiversity Strategy was refreshed in 2013, to take on board the new global and European targets and objectives for biodiversity, with a target date of 2020.
- 6.21 The Nature Conservation (Scotland) Act 2004 also applies to public bodies in exercising their function on, or so far as affecting, any land which is or forms part of a site of special scientific interest (SSSI). In this situation, SEPA must:
- consult SNH in relation to the exercise of the function;
 - have regard to any advice given by SNH; and
 - take reasonable steps to further the conservation and enhancement of the natural feature specified in the SSSI notification.
- 6.22 Generally, SEPA should not authorise any operations likely to damage any feature specified in an SSSI notification unless SNH has consented. There is a procedure whereby SEPA can do this without SNH's consent, provided that we consult with SNH and give notice, and meet other requirements.
- 6.23 The Conservation (Natural Habitats etc) Regulations 1994 provide that SEPA (as a competent authority and a relevant authority) "in the exercise of any of their functions, shall have regard to the requirements of the Habitats Directive (92/43/EC) so far as they may be effected by the exercise of those functions."
- 6.24 The SEPA Nature Conservation Procedure for Environmental Licensing, for example, provides a procedure to be applied during determination of licence or permit applications. It acts to protect features of designated conservation sites (Natura/SSSI) from harm arising from activities regulated under the Controlled Activity Regulations (CAR), Waste Management Licensing Regulations and Pollution Prevention and Control regulatory regimes. This procedure also protects a subset of the Scottish Biodiversity Strategy priority species and habitats which are considered to be sensitive to the activities that SEPA regulates.
- 6.25 Conservation procedures need to be developed further to address how sensitive terrestrial habitats on land outside designated sites are protected from the activities that SEPA regulate. Reducing the impact of pollution pressures on terrestrial habitats in the wider landscape will also be important

in safeguarding water quality. For example, surplus nitrogen in upland habitats could result in harmful amounts leaching into rivers.

- 6.26 The Natura 2000 Sites Regulations lay down requirements for SEPA, as a competent authority, in relation to specified matters where the permit is likely to have a significant effect on a European Site in Great Britain or a European offshore site.
- 6.27 In the event that SEPA is required to follow the requirements for an application likely to have a significant effect on a European Site, or a European offshore site, SEPA must follow the following procedure:-
- make an appropriate assessment of the implications for the site in view of the site's conservation objectives;
 - consult SNH, and have regard to any representations they make;
 - take the opinion of the general public;
 - only grant the permit if in light of the assessment such granting will not adversely affect the integrity of the site except in the case of overriding public interest;
 - only grant the permit in the face of an adverse assessment if there are no alternative solutions and SEPA is satisfied that there are imperative reasons of overriding public interest for doing so.

Water Quality & Flooding

- 6.28 SEPA are the lead authority for implementing the Water Framework Directive which has been implemented in Scotland by the Water Environment and Water Services (Scotland) Act, 2003 (WEWS Act). The WEWS Act presents a number of opportunities to protect land indirectly. Under the Act, SEPA is directed to produce River Basin Management Plans in which SEPA plays a key role in promoting an understanding of the links between land management and water protection measures to ensure benefits for water quality may also positively effect land and soil quality.
- 6.29 The Water Environment (Controlled Activities) (Scotland) Regulations 2011 (CAR), place controls on activities from rural land use posing a risk to the water environment from diffuse pollution and as such offer indirect protection to land. The Rural Diffuse Pollution Plan for Scotland coordinates activities on mitigating diffuse pollution. The plan also involves a targeted catchment approach and farm visits within priority catchments by SEPA to ensure sufficient changes are made to land management practices. In addition a national campaign of awareness raising is required.
- 6.30 The EU Floods Directive (2007/60/EC) was implemented in Scotland by the Flood Risk Management (Scotland) Act 2009. The Act recognises the role of land management and restoration in reducing overall flood risk and requires SEPA to consider how land management changes can store or slow down the flow of flood waters and thus contribute to sustainable management of flood risk. This provides an opportunity for indirect land protection due to the relationship between land quality deterioration and increased flooding. Improvements in land and soil quality will be central to the development of a sustainable approach to flood risk management.

Climate change

- 6.31 The *Climate Change (Scotland) Act* places duties on public bodies relating to climate change. These duties are in place to drive a fundamental shift in

addressing climate change across the public sector. SEPA (along with other public bodies) must, in exercising its functions, act in the way:

- best calculated to contribute to delivery of Scotland's emissions reduction targets (80% by 2050 and an interim target of 42% by 2020).
- best calculated to deliver any adaptation programme; and
- that it considers most sustainable.

6.32 The *Climate Change Delivery Plan* sets out high level measures to meet the statutory target for 2020, and the work to be done over the next decade to prepare for the more radical changes needed if the emissions reduction target for 2050 is to be achieved. This includes target emissions reductions from agriculture and agricultural land use.

Planning

6.33 SEPA's relationship with the land use planning system is vitally important as it presents SEPA with an opportunity to provide advice and make representations as a statutory consultee with a view to influencing forward planning and development control decisions. SEPA provides focused advice to the Scottish Government on any land-related work, taking account of emerging European policy, published strategies, and Directives.

6.34 SEPA is identified as a key agency under the Planning etc (Scotland) Act 2006 and actively assist in delivering a reformed planning agenda. SEPA's role in the land use planning system is to work with planning authorities to prepare deliverable development plans and engage early with development proposals across Scotland to ensure environmental aspects are addressed in a facilitative, solution-orientated manner.

6.35 SEPA's *Planning website* includes details of our planning advice and guidance notes. This includes a statement of SEPA's role and policy position on soils relative to land use planning. In addition, SEPA has produced guidance to help protect land from developments including:

- *Delivering SEPA's Functions to Protect Wetlands*
- *SEPA's regulatory position statement on developments on peat*
- *Good Practice During Windfarm Construction*
- *Windfarm Development – Guidance for SEPA Staff*

6.36 The Environmental Assessment (Scotland) Act 2005 ensures that all public plans, programmes, and strategies that are likely to have significant environmental effects, if implemented, are subject to environmental assessment. SEPA is a statutory consultee on SEA. The likely impacts on soils are a consideration.

6.37 SEPA's *position statement on soils relative to land use planning* summarises our role, policy position, and engagement with the land use planning system on soil related issues. The objectives of SEPA's planning service when advising on soils issues are to:

- address climate change by protecting carbon stores and improving our resilience to climate change through the protection and enhancement of soils;
- protect soil quality and the wider environment by reducing erosion, compaction and contamination;
- protect and enhance soils to act as a buffer to protect water against pollution;

- protect soil functionality.

Land-use and Management

- 6.38 The Common Agriculture Policy (CAP) decouples agricultural support from production, with increased emphasis on rural development, environmental benefit, animal health, and welfare and food safety. In order to receive CAP financial support, land managers must keep their land and soil in Good Agricultural and Environmental Condition (GAEC) and comply with a number of specified legal requirements - known as Cross Compliance. Nine of the 19 standards under GAEC relate directly to protection of soil and are aimed at the prevention of soil erosion, maintenance of soil organic matter and soil structure.
- 6.39 SEPA has a direct regulatory role in relation to two Cross Compliance requirements namely the 'protection of groundwater against pollution' and 'the use of sewage sludge in agriculture' which provides opportunities for indirect land quality protection. SEPA checks compliance with these requirements and where breaches are found provides control reports to the Agriculture, Food & Rural Communities (AFRC).
- 6.40 The Service Level Agreement and Data Sharing Agreement between AFRC and SEPA defines obligations and duties under the Common Agricultural Policy (CAP) Schemes Cross-Compliance inspection requirements, and the arrangements to share information to enforce Good Farming Practice (GFP) under the SRDP.
- 6.41 Land managers may also qualify for payments in recognition of work done to deliver additional public benefits such as environmental enhancement or better recreational access etc. SEPA has an influencing role in the development of measures encouraged through Rural Development Contracts so that they have positive implications for land as well as water and air quality.

Reporting, monitoring and assessment

- 6.42 SEPA has a statutory duty to compile information on the general state of the environment which includes 'land' under the Environment Act 1995. This includes assembling environmental data, making environmental information available to the public and advising on the state of the environment (to include state of soils and contaminated land) and on measures for its protection and enhancement. SEPA plays a leading role in achieving a shared view and common understanding of environmental risks to land and priorities for protection across Scotland.
- 6.43 SEPA will improve its understanding of the land environment by reporting on the condition of land and through monitoring and assessment. SEPA is one of seven agencies responsible for co-ordinating *CAMERAS*², a joint approach to aligning Scotland's science resource to better address government policies and priorities.
- 6.44 It will continue to be important for SEPA to support surveillance monitoring in national monitoring networks so that long term change in land and soil quality due to regional and global influences such as climate change and trans-boundary pollution can be assessed. As part of *CAMERAS*, SEPA has a lead role in *Scotland's Environment Web* which brings together environmental data

² Coordinated Agenda for Marine, Environment and Rural Affairs

and reports and aims to be the gateway to information about Scotland's environment, including land issues.

- 6.45 SEPA's own monitoring effort in relation to land involves compliance and investigative monitoring, with the development of land quality indicators to ensure regulated activities do not adversely impact on land quality.

Research and Development

- 6.46 SEPA needs to improve its understanding of the land environment, which involves understanding environmental risks to land and the ecosystem services that the land provides to help prioritise efforts internally and across Scotland. Research and development as a part of collaborative partnerships will help address these gaps. SEPA through our participation on the Land Use Consultative Group will advise on the overall direction of Scottish Government research on land.

Appendix 1

Principles for Sustainable Land Use

SEPA will have regard to all the Ten Principles given in the Scottish Government's Land Use Strategy when making plans and taking significant decisions affecting land use. The ten Principles are below, and the five with most direct relevance to SEPA's remit are highlighted in bold. The other five Principles, while of less direct relevance, will still be regarded by SEPA.

- a. **Opportunities for land use to deliver multiple benefits should be encouraged.**
- b. **Regulation should continue to protect essential public interests whilst placing as light a burden on businesses as is consistent with achieving its purpose. Incentives should be efficient and cost-effective.**
- c. **Where land is highly suitable for a primary use (for example food production, flood management, water catchment management and carbon storage) this value should be recognised in decision-making.**
- d. **Land use decisions should be informed by an understanding of the functioning of the ecosystems which they affect in order to maintain the benefits of the ecosystem services which they provide.**
- e. Landscape change should be managed positively and sympathetically, considering the implications of change at a scale appropriate to the landscape in question, given that all Scotland's landscapes are important to our sense of identity and to our individual and social wellbeing.
- f. **Land-use decisions should be informed by an understanding of the opportunities and threats brought about by the changing climate. Greenhouse gas emissions associated with land use should be reduced and land should continue to contribute to delivering climate change adaptation and mitigation objectives.**
- g. Where land has ceased to fulfil a useful function because it is derelict or vacant, this represents a significant loss of economic potential and amenity for the community concerned. It should be a priority to examine options for restoring all such land to economically, socially, or environmentally productive uses.
- h. Outdoor recreation opportunities and public access to land should be encouraged, along with the provision of accessible green space close to where people live, given their importance for health and well-being.
- i. People should have opportunities to contribute to debates and decisions about land use and management decisions which affect their lives and their future.
- j. Opportunities to broaden our understanding of the links between land use and daily living should be encouraged.

Appendix 2

Land quality protection, maintenance and restoration through regulatory regimes providing direct control.

Regulation	Land use activity controlled	SEPA's Duties and Powers as they relate to land regulation
Waste Management Licensing Regulations 2011	Keeping or treating of waste Recycling of waste on land	Licenses authorise the treatment, keeping or disposal of waste in or on land. Old, closed landfills may still have waste management licences in place. Conditions under these licenses must prevent pollution to the environment which includes the media of land as well as water and air. The 'Relevant Objectives' of the WMLR require that waste is recovered or disposed of without "endangering human health and without using processes or methods which could harm to the environment and in particular without risk to water, air, soil, plants or animals. SEPA will not accept surrender of a site licence if the condition of land is such that it is likely to cause pollution or harm to the environment which includes soil contamination. If harm is caused, the operator must carry out remediation.
	Application of waste to land	SEPA must ensure that application of exempt organic waste to land will result in agricultural or ecological improvement and not adversely affect soil quality.
Landfill (Scotland) Regulations 2003	Disposal of waste	Regulations set out specific requirements for application, conditions, and content of a permit to prevent or reduce as far as possible negative effects on the environment. SEPA must ensure that the location of landfill takes account any nature protection zones in the area, and the protection of natural heritage. It also incorporates specific requirements for the aftercare of the site. These requirements under the regulations are implemented through permits under the PPC regulations.
The Sludge (Use in Agriculture) Regulations 1989 (amended)	Recycling of waste on land	SEPA has a duty to audit the sludge registers held by sludge producers to ensure that soil metal concentrations do not exceed safe levels due to the application of sewage sludge to land and the rate of addition of metals to soils are within the limits set out in the regulations. SEPA has powers to conduct field inspections and to audit any aspect of operation under the regulations. This includes auditing soil quality following sludge application to check operator compliance with the regulations and to assess the effect of applying organic materials to land on soil quality.
The Control of Major Accident Hazards Regulations 1999	Industrial & Commercial	SEPA must ensure that appropriate measures are in place to protect soil during major accidents and that the clean up and restoration of the environment following a major accident is proportionate to the level of harm caused by the accident and the risk of continuing harm to people and the environment. This restoration will include soils. SEPA is joint competent authority with the HSE.
Radioactive Contaminated Land Regs 2007	Remediation of land	SEPA has responsibility for investigating, identifying, and requiring the appropriate remediation of any land which is contaminated by radioactivity. This is where the land is in such a state that it is causing, or there is a significant possibility of it causing, either a significant exposure of radiation to any person or significant pollution of the water environment.
The Conservation (Natural Habitats, &c.) Amendment Regulations 2008	Industrial & Commercial, landfilling, PPC intensive agricultural permissions	SEPA is required to consider whether any adverse effects on the integrity of a designated site (SACs, SPAs, Ramsar sites) would be avoided by making any licence, consent or authorisation subject to conditions. Under Regulation 48, an appropriate assessment needs to be undertaken in respect of any plan or project which includes applications for licensing permits (e.g. PPC permits).
The Pollution Prevention and Control (Scotland) Regs 2000	Industrial & Commercial, Agriculture, landfilling of waste	When issuing permits, SEPA needs to ensure that the permits contain the appropriate emission limits, conditions to ensure appropriate protection of the soil and conditions as appear appropriate for ensuring a high level of protection of the environment. This should take into account the principles that all appropriate measures should be taken against pollution (in particular through the application of best available techniques); and that no significant pollution is caused.
The Environmental Liability Regulations (Scotland) 2009	Environmental damage resulting from activities specified in the regs	SEPA has responsibility for investigating and requiring the appropriate remediation of any environmental damage caused to land or water as a result of an activity specified in Schedule 1 of the regulations. SEPA can require an operator to take measures to prevent, control and mitigate such environmental damage. In limited cases SEPA can decide to take action itself and recover the costs.

Appendix 3

Frameworks, strategies & plans which contribute to land protection aims.

Frameworks / strategies / programmes / plans	Description, groups for delivery and engagement
Scottish Soil Framework	The <i>Scottish Soil Framework</i> (SSF) aims to promote the sustainable management and protection of soils consistent with the economic, social, and environmental needs of Scotland. It lists 13 Soil Outcomes and 39 actions which includes 20 actions for SEPA. A Soil Focus Group has been established by the Scottish Government to bring together key delivery partners and stakeholders (including SEPA) to advise on the Framework's implementation.
Land Use Strategy	The <i>Land Use Strategy</i> . Sets out three Objectives relating to the economy, environment and communities – the three pillars of sustainability. It also provides a set of Principles for Sustainable Land Use to guide policy and decision making by Government and across the public sector. It builds on the Government's current activities through further Proposals to help meet the Objectives. The Land Use Strategy <i>Action Plan</i> sets out how the 13 Proposals in the Land Use Strategy will be taken forward and identifies SEPA's role in completing specific proposals.
Scottish Forestry Strategy and Implementation Plan	SEPA is a partner in the delivery of the <i>Scottish Forestry Strategy</i> which sets out a strategic framework for the long-term development of forestry in Scotland. SEPA contributes to a number of environmental quality objectives within the <i>implementation plan</i> which has included delivering training events for FCS to support SEARS inspections on compliance with GBRs for rural land use practice. The promotion and delivery of the sustainable management of soils within the implementation of the strategy is planned.
Scotland's Zero Waste Plan	SEPA is involved in a Zero Waste Scotland (the partnership which takes forward <i>Scotland's Zero Waste Plan</i>) project on the use of Anaerobic Digestion of biowaste to land attending stakeholder groups and providing technical input when required. Technical input in relation to land quality has included information in relation to soil quality and how elements such as metals behave in the soil under certain conditions, information to assess the uses of outputs from biological treatment processes.
Air Quality Strategy for England, Scotland, Wales and Northern Ireland	SEPA was involved in the consultation of this document which was commissioned by Defra and the devolved administrations. Links to protecting land quality are found in the Critical Loads and Critical Levels which are set to limit the deposition of ammonia, sulphur dioxide and oxides of nitrogen which leads to the eutrophication and acidification. Oxides of nitrogen are also precursors to ozone, which also impacts upon vegetation and can lead to a loss of biodiversity. This links in to the EC Habitats and Birds Directive and the Nitrates Directive.
Scottish Biodiversity Strategy (SBS) and Implementation Plans	SEPA is a key partner in the delivery of the 2020 Challenge for Scotland's Biodiversity- an ambitious strategy to protect and restore Scotland's biodiversity, launched on 19th June 2013. This new Challenge, together with the original 2004 Strategy together comprises the current Scottish Biodiversity Strategy. SEPA is represented on the Scottish Biodiversity Committee (SEPA Chairman), Delivery and Monitoring Group; and SEPA is Chair of the Natural Capital Group. SEPA is also represented on the Science group, habitats and species group, Protected Areas group, Invasive Non-native species group and the Marine group. One of first key tasks for the SBS is to agree Delivery Agreements with public sector agencies on how they will contribute to delivering the SBS and their biodiversity duty
River Basin Management Plans	Under the Water Environment and Water Services (Scotland) Act, 2003, SEPA has a responsibility to produce <i>River Basin Management Plans</i> for each river basin district. Implementation of the plans involves a wide range of stakeholders represented on Area Advisory Groups for each district which are chaired by SEPA. The adoption of an integrated approach for the implementation of the WEWS Act through <i>River Basin Management Planning</i> in Scotland ensures that SEPA take steps to maximise the contributions that a wide range of government and public sector policies, strategies and plans relating to land and water management can make to achieving objectives for the water environment. RBMPs are complemented by an INNS supplementary plan which includes making sure that the roles for the assessment and management of the risk of INNS which include terrestrial INNS is clear and transparent and that solutions are found to any potential gaps. SEPA's Restoration Strategy aims to set out how we will improve the morphology pressures (e.g. straightening, changes to banks and coasts, dams, weirs, culverts) which are listed in the River Basin Management Plans for Scotland. It sets out our priorities for restoration, and how SEPA and partners can use funding and regulation to achieve the priority objectives.
The rural diffuse pollution plan for Scotland	<i>The Diffuse Pollution Management Advisory Group</i> (DPMAG), a statutory stakeholder group set up under the WEWS Act, 2003 which is chaired by SEPA has produced a <i>Rural Diffuse Pollution Plan</i> (RDPP) for Scotland to coordinate activities on mitigating diffuse pollution. A key part of this plan is the achievement of multiple benefits for land and soil. The plan also involves a targeted catchment approach (Priority catchments) to ensure sufficient changes are made to land management practices.
Flood Risk Management Strategies and Local Flood Risk Management Plans	Where SEPA identifies that natural flood management can contribute to managing flood risk, this information must be taken into account when setting objectives and identifying measures in Flood Risk Management Plans. This means that natural flood management will be assessed and appraised alongside more traditional flood defences.
Scottish Government Bathing Water Strategy	SEPA's role in relation to land within <i>SG's Bathing Water Strategy</i> to strive to achieve high quality bathing waters is to address land source impacts by working closely with the Scottish Water and the agricultural community
Scotland's Climate Change Adaption Framework	SEPA has a <i>climate change plan</i> , and higher level Climate Change and Energy Action Plan to take forward obligations under the Climate Change (Scotland) Act, 2009. This includes contributing to the requirements of the Land Use Strategy. Actions within this position statement also contribute to <i>Scotland's Climate Change Adaption Framework</i> and the <i>Report on Proposals and Policies (RPP2)</i> .
Scottish Government Strategic Research Portfolio 2011-2016	As part of the research portfolio, the Land Use Consultative Group provides a forum for key stakeholders including SEPA and Scottish Governments Main Research Providers to make the link between evidence and policy. The Land Use Consultative Group which SEPA participates on will advise on the overall direction of the Scottish Government's research on the Land Use Theme.

Appendix 4

Description of land by its ecosystem services divided up into the Millennium Ecosystem Assessment categories of regulating, provisioning, supporting and cultural services.

Category	Ecosystem service
Regulating	Air-quality maintenance, climate regulation (land cover can affect local temperature and precipitation), water regulation (timing and magnitude of run-off, flooding) erosion control, water purification/detoxification (filtering out water impurities), natural hazard protection, bioremediation of waste and contaminants (removal of pollutants through storage, dilution, transformation and burial).
Provisioning	Providing the basis of the agricultural and forestry industries, a platform for building and development, raw material and a growing medium for food, fibre and energy.
Supporting	Provision of habitat supporting the preservation of nationally and internationally valued ecosystems, habitats and species. Soil formation and retention, nutrient cycling, primary production, water cycling, production of atmospheric oxygen.
Cultural	Providing a physical and cultural environment for employment, recreational use, physical health, and mental well-being.