

GLOSSARY OF TERMS FOR SOIL

Acid deposition: A comprehensive term for the various ways acidic compounds precipitate from the atmosphere and deposit onto surfaces.

Acidification: Refers to the lowering of pH in soils or water. Commonly associated with changes caused by external processes such as acid precipitation and acidic runoff.

Ammonia: Ammonia is a common naturally occurring substance. The main natural sources of ammonia are from decaying organic matter and from the excreta of humans and animals. The main man-made sources of ammonia are from the use of fertilisers and waste disposal sites or industrial processes. When ammonia enters the environment in excessive quantities it can result in acidification and eutrophication of ground and water bodies, which can harm plant and animal life. Ammonia can also have direct toxic effects on vegetation when present at high concentrations in the atmosphere.

Biodiversity (a contraction of biological diversity): The variability among living organisms from all sources including, *inter alia*, terrestrial, marine and other aquatic ecosystems and the ecological complexes of which they are part; this includes diversity within species, between species and of ecosystems.

Consultation: A process of formal or informal dialogue to identify issues of concern.

Consultation Bodies/ Authorities (authorities is the term used in Scottish SEA regulations): Organisations identified in the relevant **SEA** legislation which because of their environmental responsibilities are likely to be concerned by the effects of implementing a **Plan** and must be consulted during specific stages of **SEA**. **Consultation Bodies/ Authorities** designated for Scotland and Northern Ireland include; the Department of the Environment of Northern Ireland lead by Northern Ireland Environment Agency, Historic Scotland, Scottish Natural Heritage and the Scottish Environment Protection Agency.

Cumulative Effects: Effects that result from incremental changes to the environment caused by the **Plan** together with past, present and future actions. These **effects** can result from individually minor but collectively significant actions taking place over a period of time. In relation to **SEA**, the significance of a single effect can be increased when combined with other effects. Several actions may each have insignificant **effects** but together have a **significant effect** or, several individual **effects** of the **Plan** may have a combined **effect**.

Ecosystem: Refers to a dynamic complex of plant, animal and micro-organism communities and their non-living environment interacting as a functional unit.

Emission: The amount of a (polluting) substance emitted in a certain amount of time, typically expressed as a mass of pollutant per unit time (e.g. grams per second, or tonnes per year for a single source). Generally used in regard to discharges into air.

Engagement (or **Involvement**): Is an activity or process to encourage and facilitate stakeholder input to the **assessment**, through the provision of information, identification of issues of concern and/ or influencing or contributing to proposals or decisions.

Environmental Report: A report required by the **SEA Directive** (as specified in Article 5 and Annex I to that Directive) which forms part of the **environmental assessment** and identifies, describes and evaluates the likely significant **effects** on the environment of implementing a **Plan**.

Eutrophication: The enrichment of water or soil by nutrients, especially compounds of nitrogen and/or phosphorous, causing accelerated growth of algae and higher forms of plant life to produce an undesirable disturbance to the balance of organisms present in the water or in land habitats and to the quality of water or soil concerned.

Indicator: A measure of variables over time often used to measure achievement of **objectives**.

Fertiliser: In this guidance this term refers to any substance containing nitrogen or phosphorus compounds that is used on land to enhance growth of vegetation e.g. livestock manure, sewage sludge or other organic material.

Indirect effects: Effects, which are not a direct result of the **Plan**, often occurring away from the action (e.g. quarrying aggregates for road building) or as a result of a complex pathway.

Involvement: See **Engagement**.

Material Assets: Natural resources such as minerals, aggregates, oil and gas or man-made assets, such as existing utilities, infrastructure, transport networks, housing, industry, etc. Material assets are generally finite and their availability should be considered for future generations as well as the present. Under the **SEA** legislation, **environmental effects**, including those on material assets, need to be taken into account in an **Environmental Report**.

Mitigation: Procedure or action undertaken to prevent, reduce or offset the potential significant negative **effects** that a **Plan** may have on the environment. Within an **SEA**, mitigation should be considered alongside **enhancement** measures which seek to maximise the positive **effects** of implementing a **Plan**.

Monitoring: A continuing assessment of conditions relating to the implementation of a **Plan** which ensures that effects occur as predicted in the **SEA**. Any unforeseen **environmental effects** arising from its implementation will be identified and so allowing for appropriate remedial action to be taken.

Objectives: A statement of what is intended, specifying the desired direction of change in trends or course of action.

- Plan objectives are the overall objectives of the **Plan**. The **Plan** objectives may cover a wide range of issues depending on the nature and purpose of the **Plan**.
- SEA objectives set out the desired direction of change for the environment, thereby forming a clear set of environmental aspirations against which the performance of elements of the **Plan** can be assessed. SEA objectives can be divided into sub-objectives to refine the approach to testing the performance of a **Plan** or elements of it.
- Environmental protection objectives are those objectives, established within legislation, regulation or policy at international, European Union or national level, which are relevant to the **Plan** and which **Responsible Authorities** need to consider in developing the **Plan** and undertaking the **SEA**.

Oxides of nitrogen (NO_x): Term usually used to refer to nitrogen monoxide (nitric oxide or NO; a colourless and odourless gas) and nitrogen dioxide (NO₂; a red-brown gas with a pungent smell which is soluble in water). The main man-made releases of oxides of nitrogen are from the burning of fossil fuels (including vehicle emissions), biomass burning (including burning of forest and agricultural lands following harvest) and some production processes.

Pesticides: Any substance, preparation or organism prepared or used (among other uses) to: protect plants or wood or other plant products from harmful organisms; regulate the growth of plants; give protection against harmful creatures; or render such creatures harmless.

Plan: The term has been used throughout the guidance, meaning Plans, Programmes and Strategies for Scotland (PPS) and Plans and Programmes (PP) for Northern Ireland.

Policy: The inspiration and/ or guidance for action at a broad or strategic level. A series of policies can be included within a broader **plan** or **strategy**.

Post-Adoption SEA Statement: Information provided to the public and **Consultation Bodies/ Authorities** as part of the **SEA** following adoption of the **Plan** to meet the requirements of the relevant SEA legislation. It provides a variety of information including how consultation comments were taken into account and the measures that are to be taken to **monitor** the significant **environmental effects** of the **Plan**.

Problems (environmental): Synonymous with a situation or condition of the environment which is difficult to deal with or control.

Project: A capital undertaking typically involving the planning, design, construction and subsequent operation of a site specific development.

Qualitative information: Information relating to or involving comparisons based on descriptions or words which cannot easily be expressed using numbers and statistics.

Quantitative information: Information that can be measured and expressed using numbers and statistics.

Responsible Authority: Any person, body or office holder exercising functions of a public character. If such an authority prepares a **Plan** which requires an **SEA** then that authority is responsible for the SEA. Where more than one authority is responsible for a **Plan** they should reach an agreement as to who is responsible for the SEA.

Reasonable alternatives: Acceptable alternatives of meeting the **objectives** of the proposed **Plan**.

Scoping: The process of deciding the scope and level of detail to be included in the Environmental Report.

Scoping report: A report produced by the **Responsible Authority** describing the initial stage of the **SEA** process setting out the scope and level of detail proposed for the **Environmental Report** and used to consult the **Consultation Bodies/ Authorities** on the likely significant effects of a **Plan**.

Screening: The process of deciding whether a **Plan** is likely to have significant effects on the environment.

Screening Report: Report produced to assist the **Responsible Authority** to determine, in consultation with the **Consultation Bodies/ Authorities**, whether a **Plan** is likely to have **significant environmental effects**.

Secondary (and tertiary effects): Effects that are consequential from direct or primary **effects** of the action, but occur away from the original **effect** or as a result of a complex pathway. The term **cumulative effects** is taken to include secondary effects.

Sensitive areas: Aspects of the environment which are scarce, fragile or vulnerable to change.

Service (ecological service): In this guidance, this term refers to the benefits arising from the ecological functions of healthy ecosystems. Such benefits accrue to all living organisms, including animals and plants, rather than to humans alone.

Soil contamination: Modifications of soil features or more generally, of its chemical and biological balance, caused by the discharge of polluting substances.

Soil erosion: Is a naturally-occurring process through which soil particles are removed (usually from the soil surface) by wind or water. Soil erosion occurs in all soils to some extent but can be accelerated by human activities.

Soil organic matter: Is the accumulation of partially decayed plant and animal residues. The soil organic matter content is a fundamental soil property as it determines the soils capacity to carry out many of its other **functions**, including storing, retaining and transforming water, nutrients and contaminants as well as sustaining biodiversity and storing carbon.

Soil quality: The ability or fitness of a specific kind of soil to carry out one or several of the following functions:

- Providing the basis for food, forestry and other biomass production;
- Controlling and regulating environmental interactions - regulating water flow and quality;
- Storing carbon and maintaining the balance of gases in the air;
- Providing valued habitats & sustaining biodiversity;
- Preserving cultural and archaeological heritage;
- Providing raw material;
- Providing a platform for construction.

Soil sealing/loss: The removal or covering with an impermeable surface of existing soil due to built development (roads, housing, industry, mineral workings etc). This often results in a reduction in the range of functions that soils perform but does not necessarily result in complete loss of function as the disturbed soil may either be removed and used elsewhere or built upon.

Soil structural degradation & compaction: Soil structure relates to the organisation of soil particles. It is a fundamental property of all soils but is highly influenced by land management (e.g. poaching by grazing animals and trafficking by farm machinery), leading to degradation and compaction.

Stakeholders: Any person or organisation which has, or perceives that they have, a stake in the **Plan** and/ or **SEA** process or its outcomes. Includes statutory bodies, academics, individual members of the public and representatives of organisations and groups whether from the public, private, voluntary or community sectors.

Strategic Environmental Assessment (SEA): A form of **assessment** intended to identify and assess the likely **significant effects** of a **Plan** on the environment, the results of which are taken into account in the decision making process. In the guidance documents **SEA** refers to the type of **environmental assessment** required under the **SEA Directive**.

SEA Directive: European Directive 2001/42/EC “on the assessment of the effects of certain plans and programmes on the environment”.

SEA Regulations: The Regulations transposing the **SEA Directive** into UK law. In Scotland this is the Environmental Assessment (Scotland) Act 2005 and in Northern Ireland this is the Environmental Assessment of Plans and Programmes Regulations (Northern Ireland) 2004.

SEA topic: Aspect of the environment which the **SEA** should address; e.g. Annex I of the **SEA Directive** suggests a number of environmental topics, such as biodiversity, climate factors, water, etc.

Sustainable development: Development that ensures that the use of resources and the environment today does not restrict their use by future generations.

Synergistic effects: A type of **cumulative effect** that results when the interaction of a number of **effects** is greater than or different from the sum of the individual **effects**.

Transboundary effects: Significant **environmental effects** on another EU Member State.