

## Typical significance criteria for assessing effects on soil

Significance of effects	SEA sub-objective					Comments/ additional criteria
	To reduce levels of soil contamination	To reduce soil sealing and soil loss	To reduce soil erosion (including landslides)	To reduce structural degradation and compaction of soils	To conserve, or reduce loss of, organic matter	
<b>Major Positive (++)</b>	An action very likely to lead to an overall large reduction, or a series of smaller reductions, to sources/ levels of soil contamination. <i>E.g. Existing levels of soil contamination in the Plan area will be largely reduced through restoration/ remediation (e.g. all or most sites on the contaminated land register will be remediated where practicable). Measures will be put in place to prevent future contamination of soils, especially in sensitive and designated areas.</i>	An action very likely to lead to an overall large reduction, or a series of smaller reductions, in extent of soil sealing and rates of soil loss. <i>E.g. Net overall loss of soil due to sealing, excavation etc. is halted within the Plan area. Development activities where soil losses are inevitable are required to restore previously sealed soils to open land with productive soils where practicable, especially in sensitive and designated areas.</i>	An action very likely to lead to an overall large reduction, or a series of smaller reductions, to levels of soil erosion. <i>E.g. Appropriate soil erosion management measures are implemented in most of the areas under risk of erosion in the Plan area, particularly productive soils and sensitive and designated areas.</i>	An action very likely to lead to an overall large reduction, or a series of smaller reductions, in extent of structural degradation and compaction of soils. <i>E.g. Implementation of appropriate management measures to reverse soil compaction and structural degradation in most affected/ vulnerable areas in the Plan area, particularly productive soils and/ or sensitive and designated areas.</i>	An action very likely to lead to full conservation of soil organic matter plus an overall large reduction, or a series of smaller reductions, to rates of soil organic matter loss. <i>E.g. Loss of soil organic matter is halted and reversed in most areas under risk of depletion in the Plan area, especially productive soils and sensitive or designated areas.</i>	<p>A major positive effect is likely to have cumulative and indirect beneficial effects and is also likely to have positive effects outside the specific Plan area. Effects should not be easily reversible in the short to medium-term.</p> <p>Effects may be: short, medium, or long-term; or small, medium or large scale; or a combination of the above.</p>

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<b>Minor Positive (+)</b>	An action very likely to lead to an overall moderate reduction, or a series of smaller reductions, to sources/levels of soil contamination. <i>E.g. Existing levels of soil contamination within the Plan area will be moderately reduced through restoration and remediation (e.g. a number of sites on the contaminated land register will be remediated). Some measures will be put in place to prevent future contamination of soils.</i>	An action very likely to lead to an overall moderate reduction, or a series of smaller reductions, in extent of soil sealing and rates of soil loss. <i>E.g. Rates of loss of soil due to sealing, excavation etc. will be reduced in some areas. Development activities take a more sensitive approach to soil sealing e.g. development is limited to brownfield sites where practicable.</i>	An action very likely to lead to an overall moderate reduction, or a series of smaller reductions, to rates of soil erosion. <i>E.g. Soil erosion will be reduced in some of the affected areas. Some management measures will be put in place to partially reduce soil erosion.</i>	An action very likely to lead to an overall moderate reduction, or a series of smaller reductions, in extent of structural degradation and compaction of soils. <i>E.g. Soil compaction &amp; structure degradation will be reduced in some of the affected areas. Some management measures will be put in place to partially reduce soil compaction.</i>	An action very likely to lead to some conservation of soil organic matter plus an overall moderate reduction, or a series of smaller reductions, to rates of soil organic matter loss. <i>E.g. Loss of soil organic matter will be reduced/reversed in some areas affected by soil organic matter depletion.</i>	A minor positive effect is likely to have cumulative and indirect beneficial effects and is also likely to have positive effects outside the specific Plan area. Effects should not be easily reversible in the short to medium-term. It is also likely that it will be possible to enhance a minor positive effect through policy or project intervention. Effects may be: short, medium, or long-term; or small, medium or large scale; or a combination of the above.

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<b>Neutral (0)</b>	An action which is unlikely to have any beneficial or negative effects on soil quality/ contamination/ sealing/ erosion/ structural degradation & compaction/ soil organic matter.					Neutral scoring should only be used where it is very likely that the effect will be neither positive, nor negative on the current environmental baseline or trends. It is also likely that it will be possible to enhance a neutral effect through policy or project intervention.

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<b>Minor Negative (-)</b>	An action very likely to lead to an overall moderate increase, or a series of smaller increases, to sources/ levels of soil contamination. <i>E.g. Levels of soil contamination are likely to moderately increase. Preventative measures are unlikely to reduce the number of sites added to the contaminated land register in the future.</i>	An action very likely to lead to an overall moderate increase, or a series of smaller increases, in extent of soil sealing and levels of soil loss. <i>E.g. Rates of loss of soil due to sealing, excavation etc. will be increased in some areas. Development sometimes takes place on sensitive greenfield sites as well as less sensitive sites.</i>	An action very likely to lead to an overall moderate increase, or a series of smaller increases, to rates of soil erosion. <i>E.g. Soil erosion will be increased in some of the Plan areas.</i>	An action very likely to lead to an overall moderate increase, or a series of smaller increases, in extent of structural degradation and compaction of soils. <i>E.g. Soil compaction and/ or structural degradation will be increased in some of the Plan areas.</i>	An action very likely to lead to an overall moderate increase, or a series of smaller increases, to rates of loss of soil organic matter. <i>E.g. The Plan will lead to an increase in loss of soil organic matter in some areas.</i>	An action which may also have limited cumulative and indirect detrimental effects and/ or limited degradation of conditions outside the Plan area. It is also likely that it will be possible to enhance/ mitigate against or reverse a minor negative effect through policy or project intervention. Increases may be: short, medium, or long-term; or small, medium or large scale; or a combination of the above.

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<b>Major Negative</b> (--)	An action very likely to lead to an overall large increase, or a series of smaller increases, to sources/ levels of soil contamination. <i>E.g. Levels of soil contamination are likely to largely increase as are the pathways to vulnerable receptors. Preventative measures are likely to be removed to an extent that large increases in soil contamination incidents occur in the future. Soil contamination is likely to become a major issue in sensitive areas.</i>	An action very likely to lead to an overall large increase, or a series of smaller increases, in extent of soil sealing and levels of soil loss. <i>E.g. Loss of soil due to sealing, excavation etc. Development on greenfield sites is likely to be commonplace and the most productive soils are routinely sealed or excavated and sent to landfill. Excavated productive soils are not adequately re-used for different sites.</i>	An action very likely to lead to an overall large increase, or a series of smaller increases, to rates of soil erosion. <i>E.g. The action is likely to lead to an increase in soil erosion in large areas throughout the Plan area. The action is likely to affect highly productive land and/ or sensitive and designated areas through soil erosion.</i>	An action very likely to lead to an overall large increase, or a series of smaller increases, in extent of structural degradation and compaction of soils. <i>E.g. The action is likely to lead to an increase in soil compaction and/ or structural degradation in large areas throughout the Plan area. The action is likely to affect highly productive land and/ or sensitive and designated areas through soil compaction and/ or structural degradation.</i>	An action very likely to lead to an overall large increase, or a series of smaller increases, to rates of soil organic matter loss. <i>E.g. The action is likely to lead to an increase in loss of soil organic matter in large areas throughout the Plan area. The action is likely to affect highly productive land and/ or sensitive or designated areas through loss of soil organic matter.</i>	An action which may also have significant cumulative and indirect detrimental effect and/ or degrade conditions outside the specific Plan area. Includes the detrimental effects of an action which will be hard to enhance or reverse and are unlikely to be easily mitigated through policy or project intervention. Increases may be: short, medium, or long-term; or small, medium or large scale; or a combination of the above.

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<b>Mixed</b> (e.g. ++/-, +/-, etc.)	The effect on soil quality/ contamination/ sealing/ erosion/ structural degradation & compaction/ soil organic matter is likely to be a combination of positive and negative effects, particularly where effects are considered on sub-issues, areas or criterion.					Such mixed effects will be hard to predict, but could be significant in the long-term, or when taken with other effects e.g. cumulative or synergistic. See notes above on individual scores.
<b>Uncertain</b> (?)	The effect of an action on soil is not known, or is too unpredictable to assign a conclusive score.					Uncertainty may arise where an action covers a range of issues, or where the manner in which the action is implemented is a material factor in the nature of the effects it may have.

**Note:** This table provides a framework to illustrate how this guidance could be used.