

Appendix 7.A: Impact Definitions

The following impact defining tables were taken in part from NRA Guidelines (2009).

CRITERIA FOR ASSESSING IMPORTANCE OF SITE ATTRIBUTE

Table 7.A.1 Estimation of Importance of Sensitive Hydrogeological Attributes

Importance of Attribute	Criteria	Example
Extremely High	Attribute has a high quality or value on an international scale	Groundwater supports river, wetland or surface water body ecosystem protected by EU legislation, e.g. SAC or SPA status
Very High	Attribute has a high quality, significance or value on a regional or national scale	Regionally important aquifer with multiple wellfields Groundwater supports river, wetland or surface water body ecosystem protected by national legislation – NHA status Regionally important potable water source supplying >2500 homes Inner source protection area for regionally important water source
High	Attribute has a high quality, significance or value on a local scale	Regionally important aquifer Groundwater provides large proportion of base flow to local rivers Locally important potable water source supplying >1000 homes Outer source protection area for regionally important water source Inner source protection area for locally important water source
Medium	Attribute has a medium quality, significance or value on a local scale	Locally important aquifer Potable water source supplying >50 homes Outer source protection area for locally important water source
Low	Attribute has a low quality, significance or value on a local scale	Poor bedrock aquifer Potable water source supplying < 50 homes

CRITERIA FOR ASSESSING MAGNITUDE OF IMPACT

Table 7.A.2 Estimation of the Magnitude of a Potential Impact on an Attribute

Impact Type	Magnitude of Impact	Example
Adverse	Negligible	No measurable changes in attributes Calculated risk of serious pollution incident <0.5% annually
	Small	Removal of small proportion of aquifer Changes to aquifer or unsaturated zone resulting in minor change to water supply springs and wells, river baseflow or ecosystems. Potential low risk of pollution to groundwater from routine run-off. Calculated risk of serious pollution incident >0.5% annually.
	Moderate	Removal of moderate proportion of aquifer Changes to aquifer or unsaturated zone resulting in moderate change to existing water supply springs and wells, river baseflow or ecosystems Potential medium risk of pollution to groundwater from routine runoff Calculated risk of serious pollution incident >1% annually
	Large	Removal of large proportion of aquifer Changes to aquifer or unsaturated zone resulting in extensive change to existing water supply springs and wells, river baseflow or ecosystems Potential high risk of pollution to groundwater from routine runoff Calculated risk of serious pollution incident >2% annually
Beneficial	Minor	Minor enhancement of aquifer
	Moderate	Moderate enhancement of aquifer
	Major	Major enhancement of aquifer

CRITERIA FOR RATING SITE ATTRIBUTES

Table 7.A.3 – Estimation of the Significance of a Potential Impact on an Attribute

Importance of attribute	Magnitude of impact			
	Negligible	Small	Moderate	Large
Extremely High	Imperceptible	Significant	Profound	Profound
Very High	Imperceptible	Significant/ moderate	Profound/ significant	Profound
High	Imperceptible	Moderate/ slight	Significant/ moderate	Severe/ significant
Medium	Imperceptible	Slight	Moderate	Significant
Low	Imperceptible	Imperceptible	Slight	Slight/ moderate