

Appendix H AGS 2007 Landslide Hazard And Risk Qualitative Tables

There is not considered to be a robust and widely used assessment criteria that can simply be adopted to undertake a preliminary qualitative assessment. Therefore, a modified assessment has been generated which is based upon terminology and qualitative descriptions used in the AGS 2007 guidance. It should be noted that the AGS 2007 qualitative assessment is for the risk to property only.

The modified descriptions and risk rankings used in this assessment are presented below. Table 1 provides a qualitative measure of likelihood and Table 2 presents a qualitative measure of consequences.

Table 1: Qualitative Measures of Likelihood

Approx. Annual Probability		Implied Indicative Landslide Recurrence Interval (years)		Description	Descriptor	Level
Indicative Value	Notional Boundary					
10 ⁻¹		10		The event is expected to occur over the design life	Almost Certain	A
	5x10 ⁻²		20			
10 ⁻²		100		The event will probably occur under adverse conditions over the design life	Likely	B
	5x10 ⁻³		200			
10 ⁻³		1,000		The event could occur under adverse conditions over the design life	Possible	C
	5x10 ⁻⁴		2,000			
10 ⁻⁴		10,000		The event might occur under very adverse circumstances over the design life	Unlikely	D
	5x10 ⁻⁵		20,000			
10 ⁻⁵		100,000		The event is conceivable but only under exceptional circumstances over the design life.	Rare	E
	5x10 ⁻⁶		200,000			
10 ⁻⁶		1,000,000		The event is inconceivable or fanciful over the design life.	Barely Credible	F

Notes:
1. The above table is adapted from the AGS 2007 Appendix C tables.

Table 2: Qualitative Measures of Consequence

Description	Descriptor	Level
Structure(s) completely destroyed and/or large-scale damage requiring major engineering works for stabilisation. Could cause at least one adjacent property major consequence damage.	Catastrophic	1
Extensive damage to most of structure, and/or extending beyond site boundaries requiring significant stabilisation works. Could cause at least one adjacent property medium consequence damage.	Major	2
Moderate damage to some of structure, and/or significant part of the site requiring large stabilisation works. Could cause at least one adjacent property minor consequence damage.	Medium	3
Limited damage to part of structure, and/or part of site requiring some reinstatement stabilisation works.	Minor	4
Little damage.	Insignificant	5
Notes: 1.The above table is adapted from the AGS 2007 Appendix C tables. 2.The table primarily considered risk to property.		

The associated levels from Table 1 and 2 are then used in Table 3 to provide a qualitative risk ranking and Table 4 provides example implications for each risk ranking.

Table 3: Qualitative Risk Analysis Matrix

LIKELIHOOD	CONSEQUENCE (TO PROPERTY)				
	1 Catastrophic	2 Major	3 Medium	4 Minor	5 Insignificant
A – Almost Certain	Very High	Very High	Very High	High	Medium or Low ²
B – Likely	Very High	Very High	High	Medium	Low
C – Possible	Very High	High	Medium	Medium	Very Low
D – Unlikely	High	Medium	Low	Low	Very Low
E - Rare	Medium	Low	Low	Very Low	Very Low
F – Barely Credible	Low	Very Low	Very Low	Very Low	Very Low
Notes: 1.The above table is adapted from the AGS 2007 Appendix C tables. 2.Further consideration required, see AGS 2007 Appendix C tables for clarification.					

Table 4: Risk Level Implications

Risk Level	Example Implications¹
Very High	Unacceptable without treatment. Extensive detailed investigation, research, planning and implementation of treatment options essential to reduce risk to low. May be too expensive or impractical. Work likely to cost more than value of property.
High	Unacceptable without treatment. Detailed investigation, planning and implementation of treatment options required to reduce risk to low. Work would cost a substantial sum in relation to the value of the property.
Medium	May be tolerated in certain circumstances (subject to regulator approval) but requires investigation, planning and implementation of treatment options to reduce the risk to low. Treatment options to reduce the risk to low risk should be implemented as soon as practicable.
Low	Usually acceptable to regulators. Where treatment has been required to reduce the risk to this level, ongoing maintenance is required.
Very Low	Acceptable. Manage by normal slope maintenance procedures.
Notes: 1.The above table is adapted from the AGS 2007 Appendix C tables.	