

Geotechnical Risk Register

Table 1. Description of likelihood

Likelihood		Severity				
		1	2	3	4	5
		Minor	Moderate	Serious	Major	Catastrophic
1	Extremely unlikely	1	2	3	4	5
2	Unlikely	2	4	6	8	10
3	Likely	3	6	9	12	15
4	Extremely likely	4	8	12	16	20
5	Almost certain	5	10	15	20	25

Table 3. Description of risk classification

Risk Classification	
Low (1-8)	Ensure assumed control measures are maintained and reviewed as necessary
Medium (9-19)	Additional control measures needed to reduce risk rating to a level that is equivalent to a test of "responsible required" for
High (20-25)	Activity nor permitted. Hazard to be avoided or risk to be reduced to tolerable level.

This classification is the product of the likelihood and the severity.

Table 2. Description of severity

Potential severity of harm occurring		
1	Minor	Minor damage or loss – (no human injury)
2	Moderate	Moderate damage or loss – (Slight injury or illness)
3	Serious	Substantial damage or loss – (serious injury or illness)
4	Major	Major damage or loss – (Fatal injury)
5	Catastrophic	Catastrophic loss or damage – (Multiple fatalities)

Table 4. Risk register

Risk ID	Hazard	Consequences	Likelihood	Severity	Risk	Mitigation	Likelihood	Severity	Residual Risk
1	Destabilisation of soil slope	Failure of slope leading to material on the highway leading to accidents	2	4	8	Undertake ground investigation and carry out slope stability assessment of existing cutting If required install mitigation measure to improve slope stability	1	4	4
2	Water seepage through soil slope	Excess water on the highway leading to unsafe driving condition	4	4	16	Undertake ground investigation and carry out seepage analysis on cutting If required install mitigation measure to improve slope stability	2	4	8
3	Overtopping of SUDS pond	Excess water on the highway leading to unsafe driving conditions	2	3	6	Design SUDS pond with suitable capacity and overflow system	1	3	3
4	Overwhelming highway drainage	Flooding of the highway drainage network leading to unsafe driving conditions	3	3	9	Undertake ground investigation and carry out seepage analysis on cutting If required install mitigation measure to improve slope stability	1	3	3
5	Surface run off from BESS site	Excess water on the highway leading to unsafe driving condition	3	2	6	Design surface water drainage to prevent uncontrolled water leaving the site towards the A483 If required install mitigation measure to improve surface water control	2	2	4
6	Existing surface water flood risk	Excess water on the highway leading to unsafe driving condition	4	3	12	Review proposed ground profile to reduce risk of surface water flooding	2	3	6
7	Damage to utilities	Damage from excavation of SUDS pond, ground movements from construction or water seepage during operation	3	3	9	Review utility plans / engage with utility operators, undertaken site reconnaissance and utilise watching brief to understand presence of any utilities If required implement suitable mitigation measures	1	3	3
8	Contamination from SUDS pond	Contamination of the highway drainage network leading to regulator involvement	–	–	–	Refer to AECOM Environmental Site Assessment Report (INVA-ACM-LGY-XX-RP-GE-090824 [N1]) for details	–	–	–