Table 2 Approximate strength classification of rock

Description	Uniaxial compressive strength, MPa	Point load strength $I_{s(50)}$, MPa	Schmidt Hammer N-type, 'R'	Characteristic rocks
Very weak rock – crumbles under sharp blows with geological pick point, can be cut with pocket knife	1–25	0.04–1.0	10–35	Weathered and weakly compacted sedimentary rocks – chalk, rock salt
Weak rock – shallow cuts or scraping with pocket knife with difficulty, pick point indents deeply with firm blow	25–50	1.0–1.5	35–40	Weakly cemented sedimentary rocks – coal, siltstone, also schist
Moderately strong rock – knife cannot be used to scrape or peel surface, shallow indentation under firm blow from pick point	50–100	1.5–4.0	40–50	Competent sedimentary rocks – sandstone, shale, slate
Strong rock – hand-held sample breaks with one firm blow from hammer end of geological pick	100–200	4.0–10.0	50–60	Competent igneous and metamorphic rocks – marble, granite, gneiss
Very strong rock – requires many blows from geological pick to break intact sample	>200	>10	>60	Dense fine-grained igneous and Metamorphic rocks – quartzite, dolerite, gabbro, basalt

Modified from Selby, 1993: Table 5.3.