Terrestrial photogrammetry nowadays offers a reasonably cheap, intuitive and effective approach to 3D-modelling. However, the important choice, which sensor and which software to use is not straight forward and needs consideration as the choice will have effects on the resulting 3D point cloud and its derivatives. We compare five different sensors as well as four different state-of-the-art software packages for a single application, the modelling of a vegetated rock face. The five sensors represent different resolutions, sensor sizes and price segments of the cameras. The software packages used are: (1) Agisoft PhotoScan Pro (1.16), (2) Pix4D (2.0.89), (3) a combination of Visual SFM (V0.5.22) and SURE (1.2.0.286), and (4) MicMac (1.0). We took photos of a vegetated rock face from identical positions with all sensors. Then we compared the results of the different software packages regarding the ease of the workflow, visual appeal, similarity and quality of the point cloud. While PhotoScan and Pix4D offer the user-friendliest workflows, they are also "black-box" programmes giving only little insight into their processing. Unsatisfying results may only be changed by modifying settings within a module. The combined workflow of Visual SFM, SURE and CloudCompare is just as simple but requires more user interaction. MicMac turned out to be the most challenging software as it is less user-friendly. However, MicMac offers the most possibilities to influence the processing workflow. The resulting point-clouds of PhotoScan and MicMac are the most appealing.