



The main component of correct documentation are exact measurements. Those could be achieved by the use of laser-based measuring with reference to geodetic points.

Outside of the towns those points are often hard to locate and landmarks don't meet the required accuracy in the most cases.

We prefer to produce our very own fixed points by using a GPS. The high accuracy of the measurements could be reached with correction datas of the mobile provider.

MEASURING EQUIPMENT

- 5 Total Stations (Pentax, Sokkia, Trimble)
- 4 GPS systems (FLINT, Stonex, Trimble)
- Panasonic Toughbooks for each measurement device with appropriate kubit survey software
- Software for digital processing of documentation in CAD systems or in FIS
- Digital and analog photographic equipment (Canon, Fuji, Minolta and Nokia)

Shovel, spade, trowel, brush - the classical tools of an archaeologist may be sufficient for some small investigation or a single worker on an excavation site.

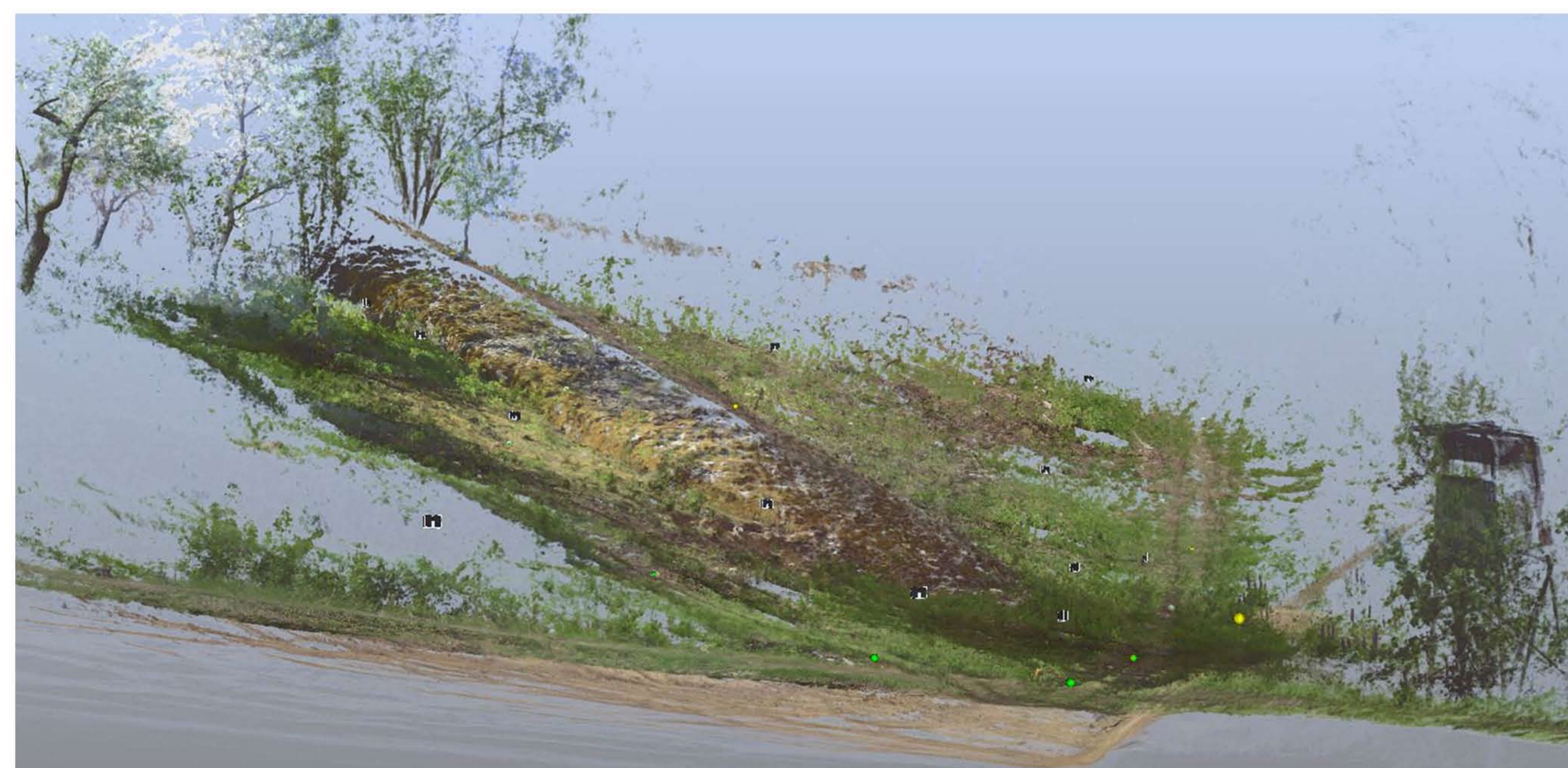
The up-to-date equipment of an excavation requires different technical components. Those should help to increase the effectiveness and keep the standards of security.

Layers of modern debris can be removed with compact excavators. This machines can also be used for the salvage of finds 'en bloc' or to lift heavy objects.

With our mobile offices we are able to accept and conduct new tasks quickly at a high professional standard.

EXCAVATION SITE TECHNIQUE

- Compact excavators
Neuson 2203 Type (1,5t)
Yanmar ViO50 (4,8t)
- Construction stuff like casing materials and fences
- Submersible pumps for wet soils
- Canopies and heated Tunnel Tents to withstand difficult weather conditions
- Office containers and trailers
- Carpool of 15 service vehicles including passenger and truck vans



The precise documentation of structures like elongated mounds in old vineyards (fig. left) could be achieved by applying a FARO Focus 3D Laser Scanner, an uncomplicated and at the same time highly precise measuring instrument.

The measuring procedure starts in the laser unit, from where a rotating mirror directs the laser beam into the area of measurement. The distance is distinctly determined via the running time shift between the transmission beam and the reflected laser beam.

With the help of the angle of the rotating mirror and the angle of the laser scanner itself the Faro module calculates the coordinates and stores the 3D-position of the point. This procedure is repeated a several hundred times per second and creates a dense point cloud and a detailed 3D-image of the environment.

The resolution is up to a hundred times higher than with a conventional megapixel camera. Reference targets make it possible to connect several scans of different visible ranges.

The record may also be used to extract datas for CAD drawings and further processes. Distances or sizes in the pointcloud can be read of easily with the faro software. Through processing the datas with AutoCAD software different isometric views could be produced. The records were georeferenced with a total station and/or with a GPS.

For more detailed information an Explius 3D Scanner approved to be a suitable tool. With the easy to handle device it is more practical to scan smaller sized features, e.g. burials, architectural details or even finds.