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

Outside of the towns those points are often hard to locate and landmarks don’t meet the required accuracy in 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 data of the mobile provider.

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

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 Focus 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 data for CAD drawings and further processes. Distances or sizes in the pointcloud can be read in easily with the help of 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 Equus 10 Scanner approved to be a suitable tool. With the way to handle device it is more practical to scan smaller sized features, e.g. buildings, architectural details or even finds.

EXCAVATION SITE TECHNIQUE
- Compact excavators
- Vocansa 2003 Type 0,50
- Yammar Vi050 (4,80)
- Construction stuff like casing, pipes and fences
- Submersible pumps for wet soils
- Canopies and heated Tunnel Tents to withstand difficult weather conditions
- Office containers and trailers
- Carpool of 11 service vehicles including passenger and truck vans

Shovel, spade, travel 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. This should help to increase the efficiency 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.