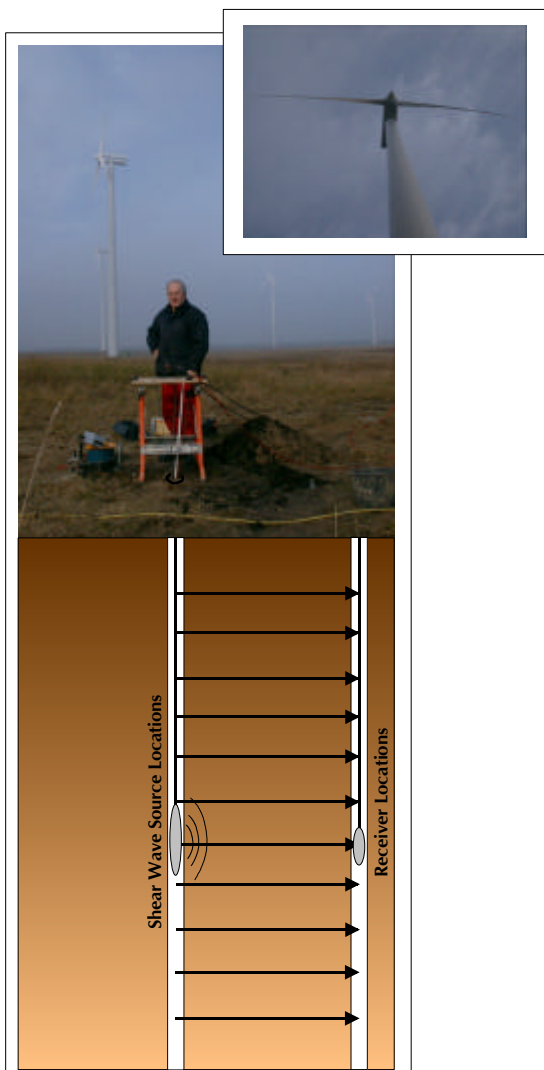




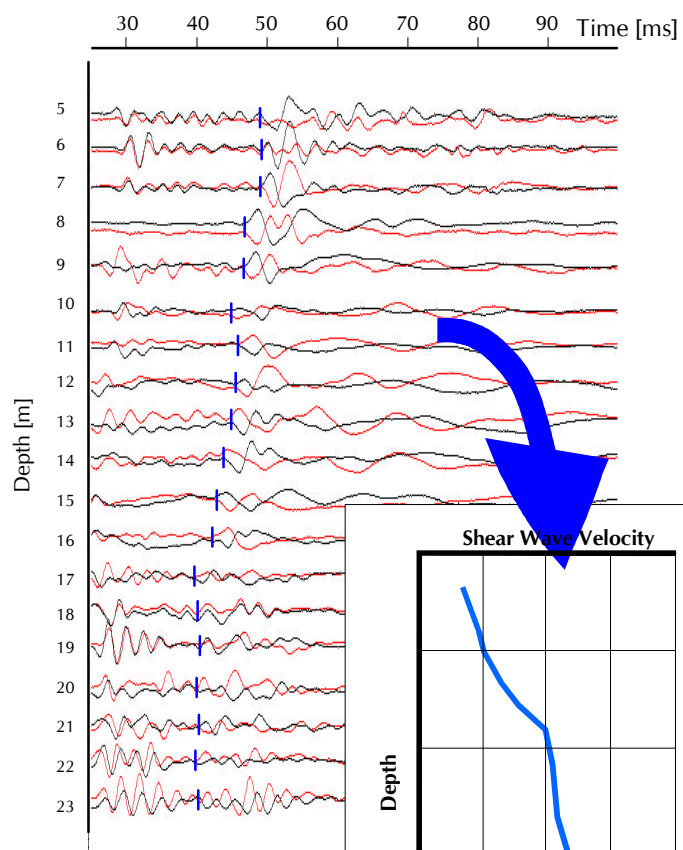
InSitu Shear Wave Testing

Construction on save ground demands knowledge about subsurface parameters. Especially geotechnical shear paramaters have to be known to avoid subsidence of installations or oversized grouting activities to stabilize ground before construction. Among others, shear wave velocity is a crucial rock parameter which has to be known to calculate rocks shear stiffness or different elastic rock parameters. Geotomographie's shear wave sources such as SH66 or HBH36 and receiver systems such as BGK3 or IBR are designed for crosshole measurements or vertical seismic profilings.

Shear wave measurements are usually carried out as cross-hole tests. Typical borehole distances are 5 to 10 m. The seismic shear wave source and multi-component geophones are lowered parallel to each other down the borehole. Seismic waves are recorded and shear wave arrivals are commonly identified by their changing polarity behaviour (see red/black seismic traces). Calculated seismic velocities can be used to calculate rocks shear parameters needed for constructions.



Shear wave testing at a windmill site



Shear wave results and interpretation

