Course Title	SP111: Shallow Foundations and Settlement – Principles and Practice
Duration	1 day
Delivery Mode	Full day session
Cost	£250 + VAT per delegate
Delegate Nos.	6 to 15
Intended Audience	• Engineering geologists with some limited design experience wanting to develop their understanding • Graduate civil engineers early in their careers wanting to refresh their understanding and skills
Objectives	At the end of this course delegates should have: • Refreshed their understanding of the different types of shallow foundation and their modes of failure, using case studies • Developed their understanding of basic soil mechanics principles relevant to soil strength and compressibility • Developed their knowledge and understanding of bearing capacity • Developed their knowledge and understanding of the components of settlement and their prediction • Applied their knowledge and understanding to the design of foundations in a range of soil types
Course Description	Those involved in the design of developments, either as designers or in an advisory role, need to understand how the above ground structure will interact with and affect the ground. This requires a sound understanding of soil behaviour in principle. The aim of this course is to develop the abilities of the delegates in the design of shallow foundations and the prediction of settlements. It will begin with a review of how foundations are built and fail, and the fundamentals of bearing capacity and settlement for shallow foundations. The course will progress to design principles and practice, and will culminate with the application of the learning to case studies to be supplied by the delegates ideally. The course will be taught via a series of short lectures followed by discussions and tutorial questions to reinforce the learning.
Indicative Content	The indicative content comprises the following: • Types of foundation • Failure modes for shallow foundations • Brief reprise of the relevant soil mechanics principles • Shear failure and bearing capacity theory • Stress distribution • Types of settlement and their occurrence • Estimation of settlement under shallow foundations • Design case studies to apply learning
Course Tutor	The tutor will be Dr Andy Goodwin, a chartered engineer with about 30 years' experience in industry and academia. He is a geotechnical specialist, with a thorough knowledge of both the theory and practicalities of geotechnical engineering.