

Course Title	SP114 Earthworks – Principles and Practice
Duration	1 day
Delivery Mode	Full time
Cost	£250 + VAT per delegate
Delegate Nos.	4 to 20
Intended Audience	<ul style="list-style-type: none"> • Engineering geologists and geotechnical engineers with limited / some design experience wanting to develop their understanding and skills • Experienced engineering geologists and geotechnical engineers wanting to refresh their understanding or extend it into earthworks
Objectives	<p>At the end of this course delegates should have:</p> <ul style="list-style-type: none"> • Refreshed their understanding of the types of earthworks and their contrasting performance requirements • Developed an appreciation of earthworks construction methods • Developed their understanding of how fills perform and how to design general earthworks • Developed their appreciation of earthworks specifications and how to set acceptability criteria based on the available GI data • Developed their knowledge and understanding of the requirements for monitoring, control and reporting of earthworks
Course Description	<p>Earthworks form part of most development projects, for example development platforms and highways. Design and construction must be considered holistically if a successful earthworks scheme is to be delivered that cost-effectively delivers the required performance.</p> <p>The course will start from a review of the typical forms of earthworks and progress to emphasise the need to clearly understand and integrate the design and construction aspects. Key elements to the design of fills will then be addressed including the range of specification types and typical forms / content, and the definition of appropriate acceptability criteria to achieve the required performance characteristics. Monitoring and control of earthworks during and post construction will also be addressed, as will reporting and certification.</p> <p>The course will be taught via a series of lectures followed by tutorial questions with case studies to illustrate the material.</p>
Course Tutor	<p>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.</p>
Indicative Content	<p>The indicative content comprises the following:</p> <ul style="list-style-type: none"> • Range of earthworks forms & their contrasting performance • Earthworks compaction plant and construction requirements • Performance of fills in principle: strength; bearing capacity and lateral stability; forms of settlement; permeability and erosion • Defining performance requirements in relation to project drivers • Forms and nature of a range of earthworks specifications • Acceptability criteria and relationship to ground knowledge • Monitoring, testing and control of earthworks • Verification, certification and reporting of earthworks