An Interactive Web-based Learning Environment for the Presentation of Sustainable Development Case Study Material on Contaminated Land

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Belfast Presentation 19th June 2003
Scope of Presentation

• Why land remediation?
• The Edinburgh team
• SD in Civil and Environmental Engineering Teaching
• The Web-Based Case Study Tool
• Future development
Why Land Remediation?

• Ten years ago no such market, in 2000 the annual turnover about £300M, now nearer £1B
• Now a heavily regulated market with risk assessment a key component
• Multi-disciplinary business with engineering a core activity
• Contaminated land/sites still a sensitive issue
The Edinburgh Team

CASE STUDY
Andrew Barry, Harry Eccles, Martin Crapper, Wilma Alexander, Angel de Vincente, Peter Ng

TEACHING
Andrew Barry, Harry Eccles, Martin Crapper, Robin Wardlaw, Jason Gerhard, Miklas Scholz

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SD in Civil and Environmental Engineering Teaching

- Civil Engineering 1h
- Second Year Courses
- CE3.11 Environmental Issues and CE3.15 Sustainability
- Honours Modules and Designs
- Other Engineering Disciplines
The Web-Based Case Study Tool

• Principles
• Implementation
• Testing
• Feedback
Principles

• Replicate Design Office Experience
• Budgeting and Costing
• Seeking and Interpretation of Data
• External Modelling/Spreadsheet tools
• Assessment of Solution
• An x,y,z,t problem
Implementation

• Simple, Portable, Open Source
• Perl and PHP Scripts
• Run from see.ed.ac.uk Web Server
• No reliance on downloads
• No reliance on specific modelling tools etc
• Links to helpful sites
Testing

• 12\textsuperscript{th}-23\textsuperscript{rd} May 2003
• 15 Honours Students in Civil and Environmental Engineering
• Wide-Ranging Project based on Clophill Case Study
• Case Study adapted for educational reasons
Feedback

- No problems with use
- Favourable comments
- Borehole/Trench worked well
- Excellent Quality of Reports
Future Development

• MySQL Database
• Budgeting needs refinement
• Clickable Maps for Borehole and Trench
• Widening Application Area
• Promote in Schools
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