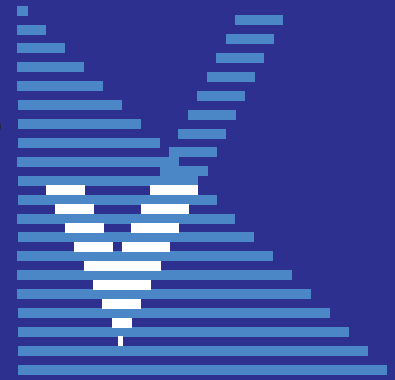# ReActiv

ReActiv is a quick-to-learn, easy-to-use program for designing reinforced slopes using soils nails or geo-synthetics.

ReActiv implements the design method given in the UK Highways Agency's Advice Note HA68, based on a two-part wedge mechanism.

Enter your data via clearly labelled property editors and the main job view automatically displays what you have specified.

Click the calculate button and get an optimised design layout instantly on your screen. Switch design options and you can re-calculate results in seconds.
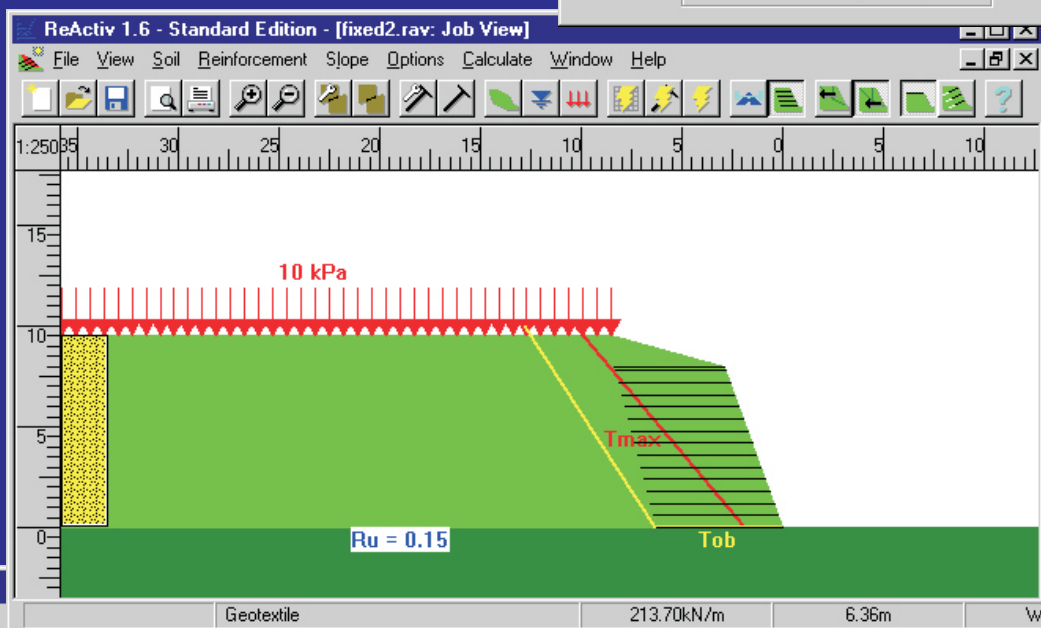
ReActiv is supplied with a detailed User Manual, including three step-by-step tutorials. A separate chapter explains the background theory and assumptions behind ReActiv, and includes a comparison with published results.

Technical support for ReActiv is provided free-of-charge for 30 days and thereafter via an annual support agreement. Service Packs are placed on the Geocentrix website (www.geocentrix.co.uk/support) at regular intervals.

Geocentrix, Scenic House, 54 Wilmot Way, Banstead, Surrey, SM7 2PY, UK

ReActiv 1.6 Specification

INTEGRATED DESIGN ENVIRONMENT

MAIN WINDOW
- Separate views showing reinforced slope, failure mechanisms, and reinforcement layout
- Button bar gives quick access to commonly-used commands
- Status bar summarizes key information

JOB VIEW
- Graphical display of reinforced slope
- Pop-up menus using right mouse button
- Soil column allows fast-editing of selected soil
- Horizontal and vertical rulers
- 4 different engineering scales
- Object-oriented design for greater reliability and user-control

MECHANISMS & REINFORCEMENT VIEWS
- Spreadsheet-like display of calculated mechanisms/reinforcement
- Individual columns can be re-sized and/or hidden
- Individual rows can be re-sized

DIALOGUE BOXES
- Easy-to-use dialogue boxes for entering engineering parameters
- Picture buttons clarify the options available to the end user
- Full validation of all input parameters
- Default parameters provided at the click of a button
- Default parameters can be customized

CALCULATION OPTIONS
- Calculates out-of-balance force for individual mechanisms
- Calculates critical mechanisms on a grid of X, Y coordinates
- Automatically calculates the T_{max} & T_{ob} mechanisms
- Automatically calculates the reinforcement required to stabilize the slope

PRINTING
- Full range of printers supported
- Select which pages to print
- Project information displayed at top of every printed page
- Print preview capability allows you to see what will be printed

GEOTECHNICAL CAPABILITIES

COMPATIBILITY WITH STANDARDS
- Fully compatible with the Department of Transport's Advice Note HA68
- Extends design methods given in Advice Note to give more economical designs

SOIL CLASSIFICATION SYSTEM AND DATABASE
- Choice of soils: gravel, sand, silt, clay, fill, chalk, and custom soils
- Classification system based on BS5930, DIN 18196, and ASTM D2487-1069
- Database of soil properties for over 250 different soil types

SLOPE OPTIONS
- Choice of slope geometries: One-part, Two-part, and Infinite slopes
- Full control over height and angle of slope
- Separate control over upper and lower parts of slope and slope crest
- Easy switching of selected soil type

WATER REGIME OPTIONS
- Choice of Water requimes: Parabolic, Parallel, Horizontal, and Custom
- Automatic calculates r_u for Parabolic, Parallel, and Horizontal water regimes

SURCHARGE OPTIONS
- Apply surcharge to upper part or crest of slope

REINFORCEMENT OPTIONS
- Choice of reinforcement: Geotextile, Geogrid, Soil Nails, and Custom
- Full control over key design parameters: Direct Shear Factor, Bearing Factor, Interwedge Friction Factor
- Specify horizontal spacing and hole diameter for soil nails
- Specify angle of inclination of soil nails and Custom reinforcement
- Reduce nail lengths by alternative design procedure
- Add additional layer at top of slope
- Apply reinforcement force to Wedge 1 or 2

DOCUMENTATION AND SUPPORT

USER MANUAL
- 130+ page printed User Manual
- Includes three step-by-step tutorials and comparison with published results
- Covers background theory and assumptions
- Also supplied in electronic (Adobe® PDF) format

SUPPLIED EXAMPLES
- Embankment in dense sand
- Cutting in stiff clay
- Embankment in stiff clay
- Slip repair in stiff clay
- Cutting with "unstable" upper slope

TECHNICAL SUPPORT
- 30 days free technical support
- Service Packs available for free download from Geocentrix's website
- Ongoing telephone/fax/email support available via annual support agreement

SYSTEM REQUIREMENTS
- IBM®-compatible PC
- Pentium (or higher) processor
- Microsoft®Windows® 95/98/Me or NT4/2000/XP
- Adobe® Reader® 5.0 or later (Acrobat Reader 7 supplied on CD)
- 6.5Mb free space on hard disk
- CD-ROM drive
- Any printer supported by Windows
- Mouse or similar pointing device
- Internet access (optional)

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