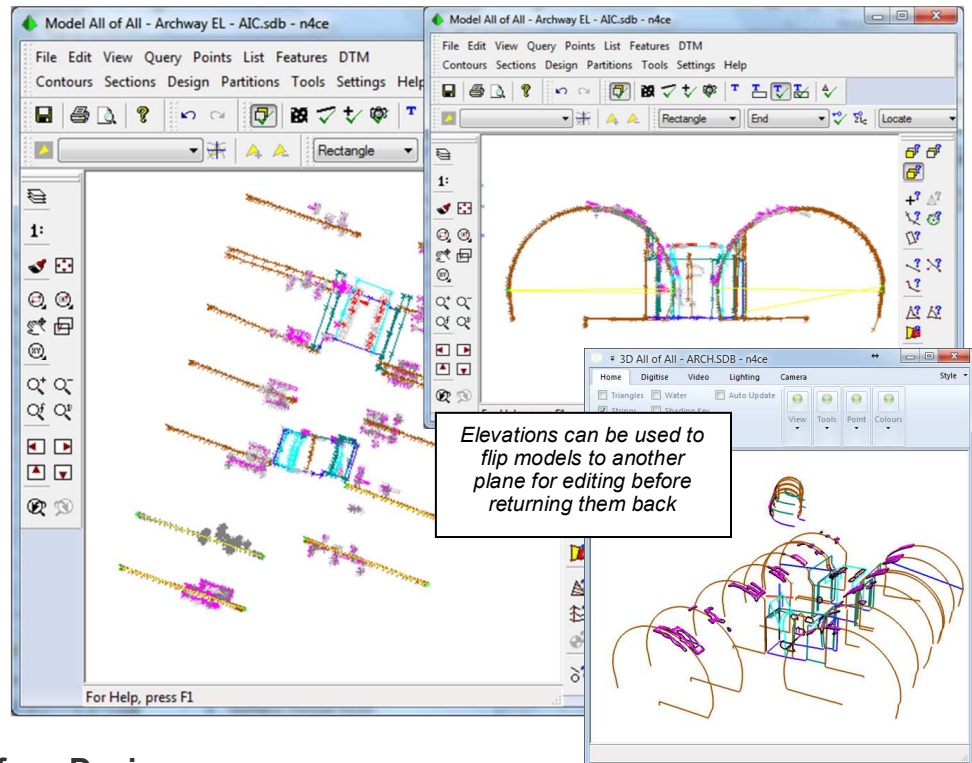# ^{n}4ce Professional

Applications in CADD Ltd.

Building on the ^{n}4ce Lite platform, the Pro edition introduces design tools and extended functionality, including creating and recording 3D fly throughs. It opens up the package with access to dedicated CAD backcloths in all models, List picking and external Project referencing.

^{n}4ce Prof users will likely be office based, delving into the depths of ^{n}4ce's functionality. Fine detail makes all the difference here like volumes from sections and groups, river sections, intelligent layouts, bench & batter, design strings, 3D fly-throughs, plus much more.
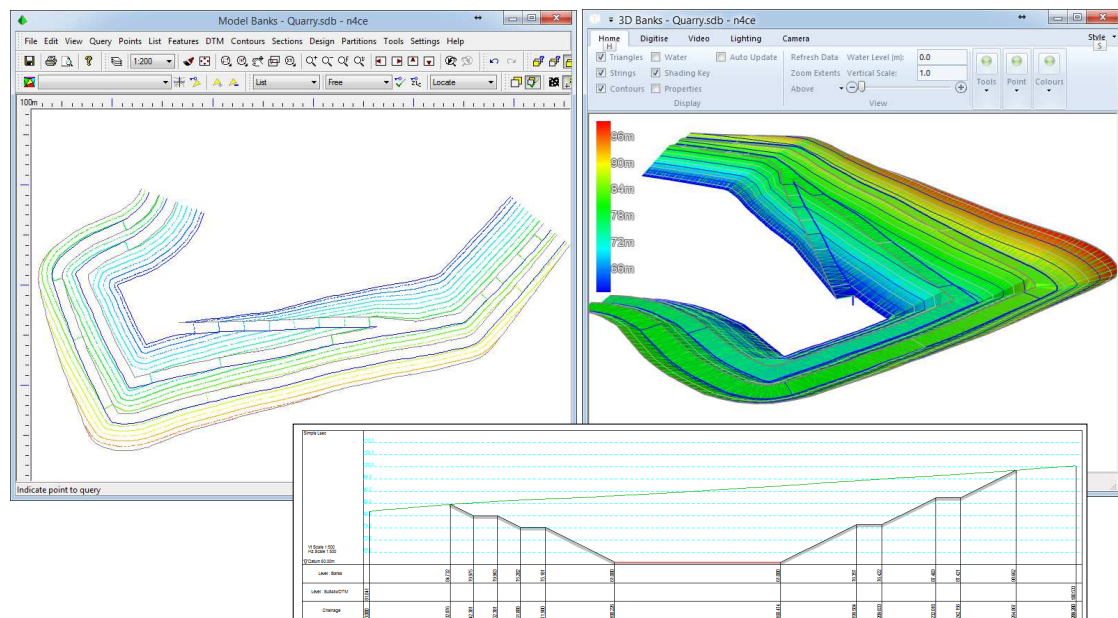
Principal Features

- Backcloth Options – query, on/off
- List Selection in model and CAD
- Dedicated CAD backcloths tools
  - tables
  - hatching
  - slope tadpoles
  - curve fitted contours
- Point tables & profile templates
- Extended point and feature editing
- Extended DTM editing
- Extended Sections
  - visibility
  - river sections (ISIS & Hec-ras)
  - feature projections
- Extended Volumes
  - sections
  - contours
  - regions
- Extended CAD editing
- Point projecting onto features
  - chainage, cant & gauge
- Generate 3D points from CAD
  - points, lines, symbols, text
  - contours
- Overlapping height text filter
- Model creation
  - merging
  - copying
  - grids
  - isopachytes
  - external referencing
- Partition layouts
  - single or arrays
  - key plans
- Surface Design tools
  - parallel
  - batter intercepts
  - grade
  - densify
  - MX Design strings
- Transformations
  - 2D and 3D
  - Elevations

Elevations can be used to flip models to another plane for editing before returning them back
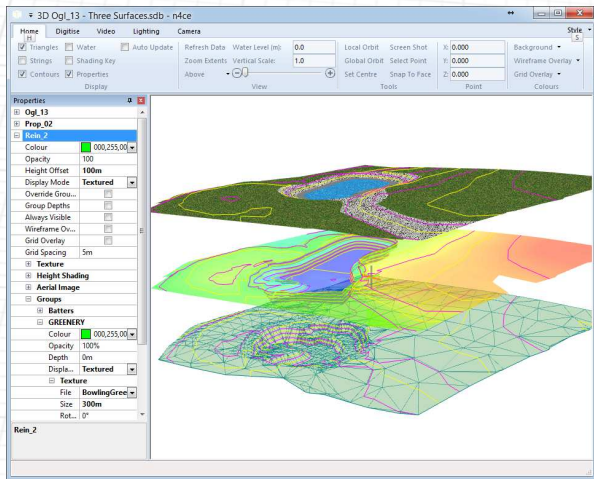
Surface Design

^{n}4ce has a number of tools to make editing models less erroneous and time consuming. These apply to Points, Features and DTM menus.

In addition to basic delete, move and inserts, design tools are introduced allowing you to create models using strings and alignment data. Profile templates can be swept along design strings to create parallel strings. Batter strings can be projected down a reference surface with decusping on internal corners and fanning on external corners.
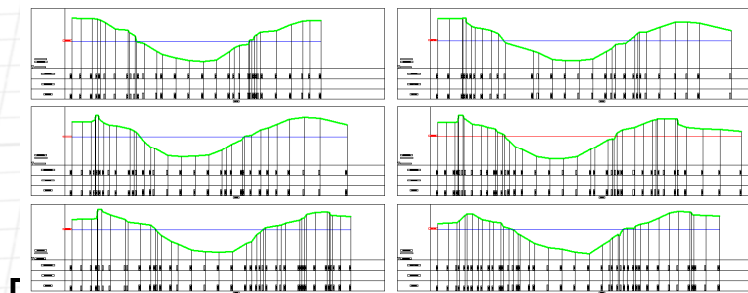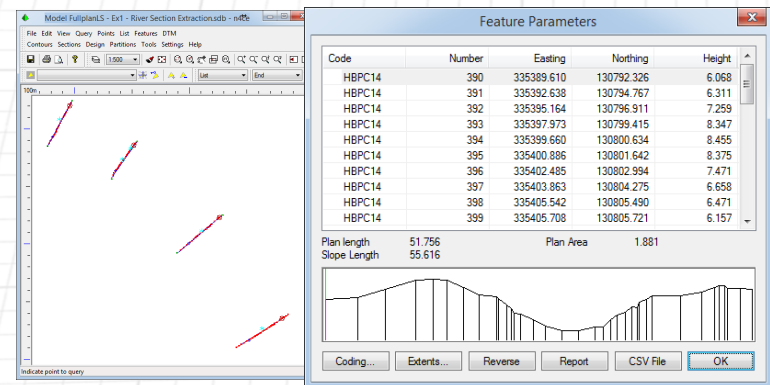
3D Viewing

With multiple 3D surfaces an artificial offset can be applied to separate OGL, propose and reinstatements.

Models can be shaded and groups texture mapped. Wire frame grids and triangles give other perspectives to 3D views.
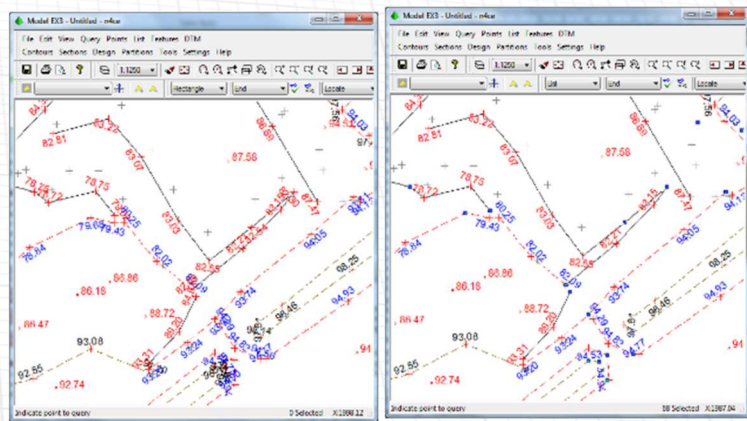
River Sections

^{n}4ce Pro provides additional section taking and plotting tools including radial sections for visibility analysis and River sections. In the latter, baseline points are identified with a string number and all profile data with the same string number projected onto this baseline, including structures. Multi section plots and exports to hydro modelling packages are available.

A **Dedicated CAD Backcloth** is attached to each model and accessed using the Pencil Icon. This is where tables, tadpoles, hatching, dimensioning, curve fitted contours and committed models elements will be stored.

Text and Feature Editing

One of the first jobs when viewing a survey is the removal of overlapping text. The Pro edition provides tools to move, delete, flip and auto filter height text.
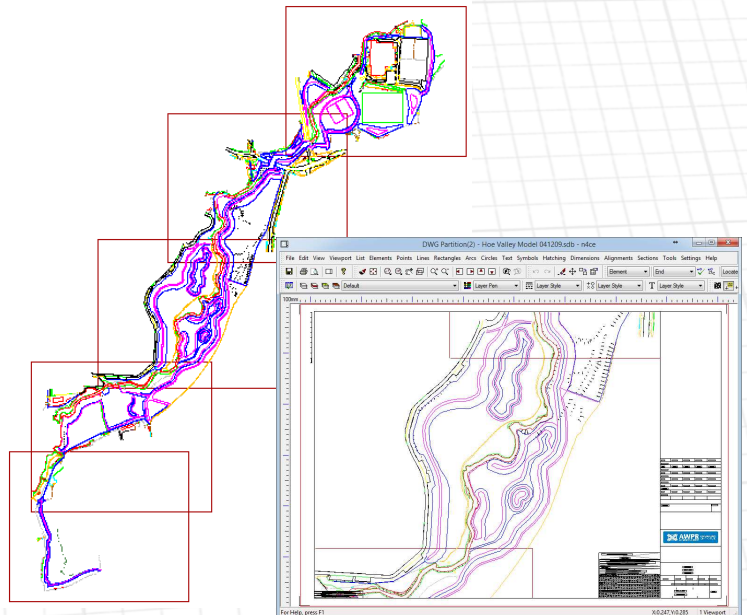

Rather than the annotation being automatically removed, filtered points can be added to a List instead. They will then be identified with a marker on the screen. The user can then manually edit the indicated points if they so wish. Moving rather than removing the selected annotation.

Features edits work on Lines, Shapes and Symbols, each have their own specific editing tools. For Lines these include curve fitting, straightening, close, break, join, extend and offsets. Apex options include append, move and insert.

Partitions and Key Plans

A facility in ^{n}4ce Pro allows the automatic creation of **Drawings** by splitting up CAD and models into Sheets, called **Partitions**. A **Key Plan** showing Partitions is shown below.

If changes are made to data in the project, these partitions will update. If the position or sizing of the **View Port** in a partition is changed in the Drawing, the Key Plan will also update.