Results

Cut/Fill · https://mes100.com/docs/results/

Excel Report

Detail & summary reports of earthworks are in tab named “Excel Report”,

Snapshot of the summary of the calculation report is shown below.

Terms used in snapshot above are explained below:

Bank Cut or **Bank Fill** is volume of earthworks in its natural state that will be cut or filled before disturbance

Expanded Cut is increased volume of earthworks after excavated from its natural source

Volume Needed before Compacted Fill is volume of loose earthworks that is needed for the fill before compacted by mechanical equipment

Export is nett Expanded Cut that will be exported out from site

Import is nett volume of loose earthworks needed before the compacted fill that will be imported into the site

Cut/Fill Contour

Cut/Fill contour show the areas where cut and fill take place. The total cut and fill areas are shown at bottom left. Tracing can also be shown via ticking ‘show tracing’ on the right.

Buttons mesh, cut line, retaining wall, and cut/fill grid have the following functions:-

Mesh: Shows mesh of platforms

Cut line: Shows cut lines drawn in input and allows user to see a cut line via double-clicking on it

Retaining Wall: Shows retaining wall identified in project, with summary at bottom of drawing

Cut/fill grid: Shows cut/fill depth at each grid point based on resolution determined by user

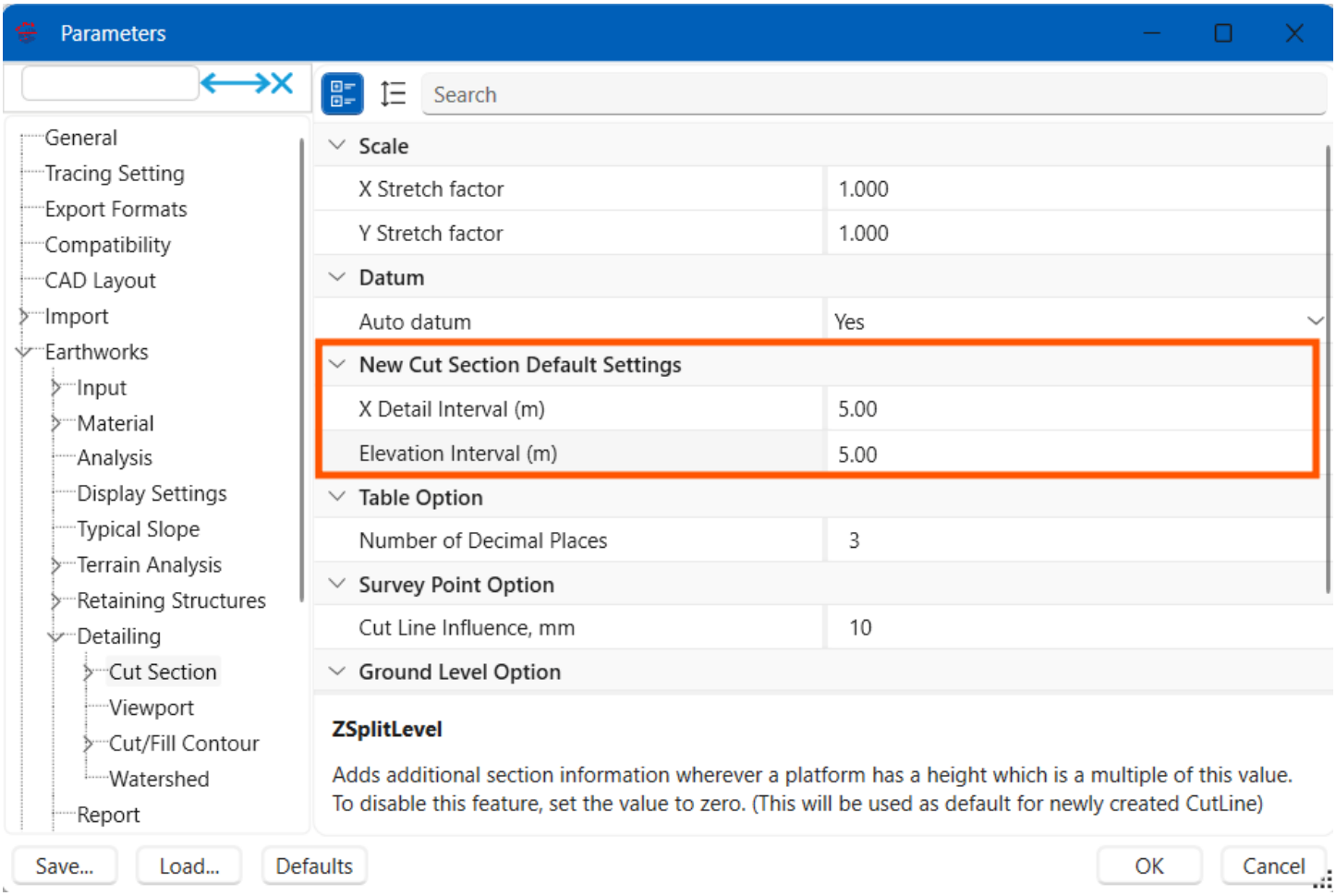
Snapshot below shows all buttons activated.

Cut Section

Cut sections can be viewed before or after analysis. Cut section can be viewed one by one or all at the same time.

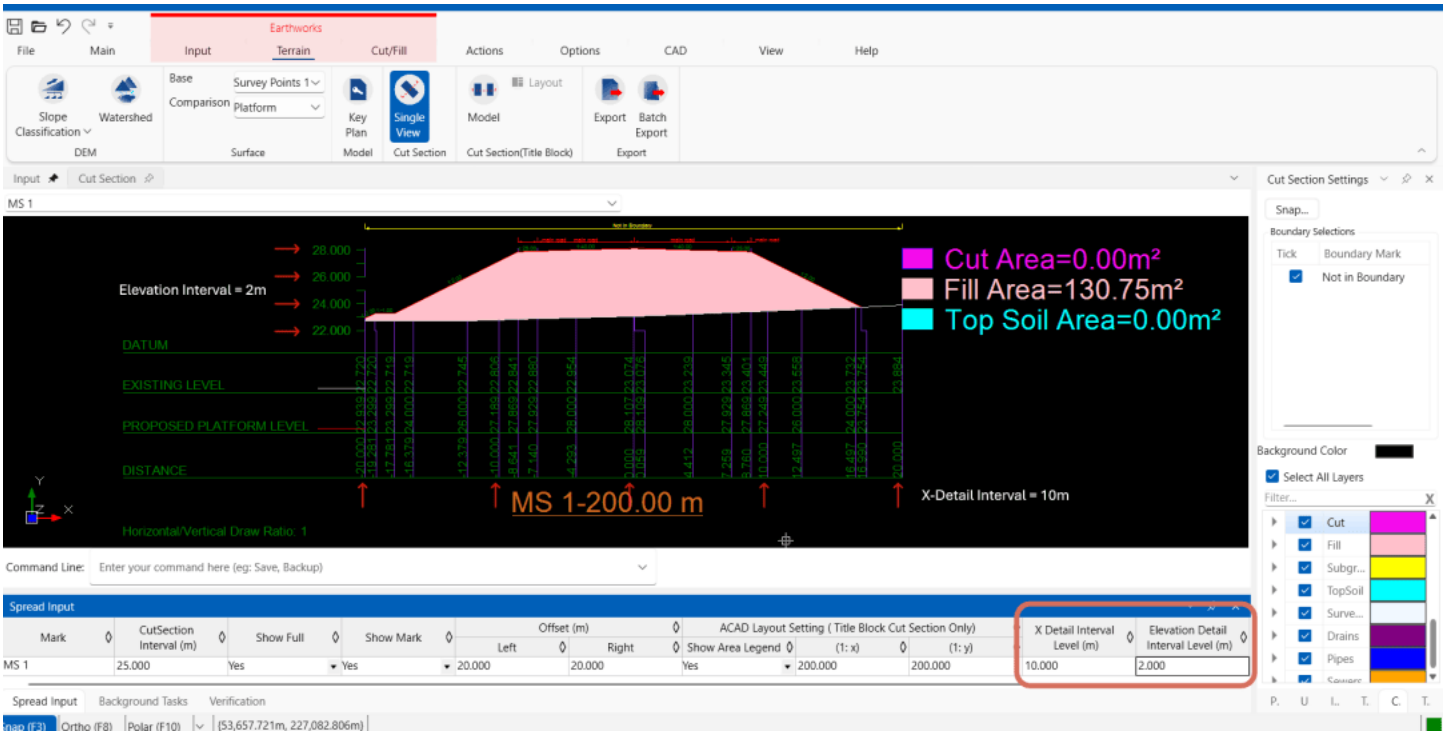
Setting X-Detail and Elevation Detail Intervals in Cut Section

Users can adjust the Detail Interval for X and Z axis. X-Detail and Elevation Detail Interval options can be found in the Project Settings.



Options > Project Settings > Earthworks > Detailing > Cut Section > Change the X-Detail Interval/ Elevation Interval

For example, X-Detail Interval Level is 10m and Elevation Detail Interval Level is 2m.



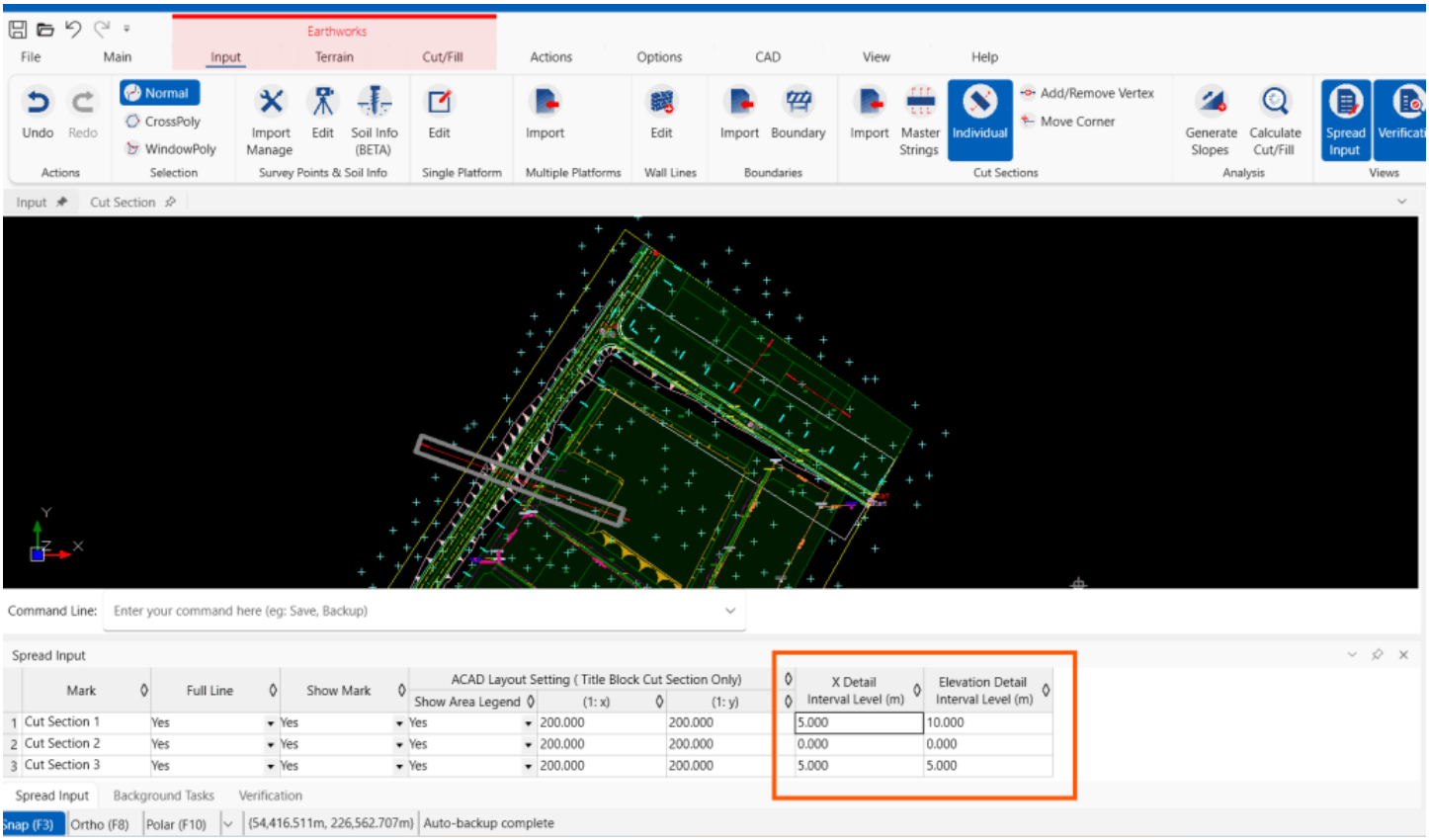
Why Doesn’t My Cut Section Reflect the Detail Interval Changes?

This is a common point of confusion, and here is the answer:

The changes made in the Project Settings only apply to **newly created individual cut sections.** If the cut sections (be it Master Strings/ Individual) were created **before** adjusting the cut section interval in the Project Settings, it will not be updated automatically.

How to update X-Detail and Elevation Interval Detail in Existing Cut Section?

To change the detail interval in existing cut sections, click on Master Strings or Individual and change the X-Detail or Elevation Interval from the Spread Input instead.



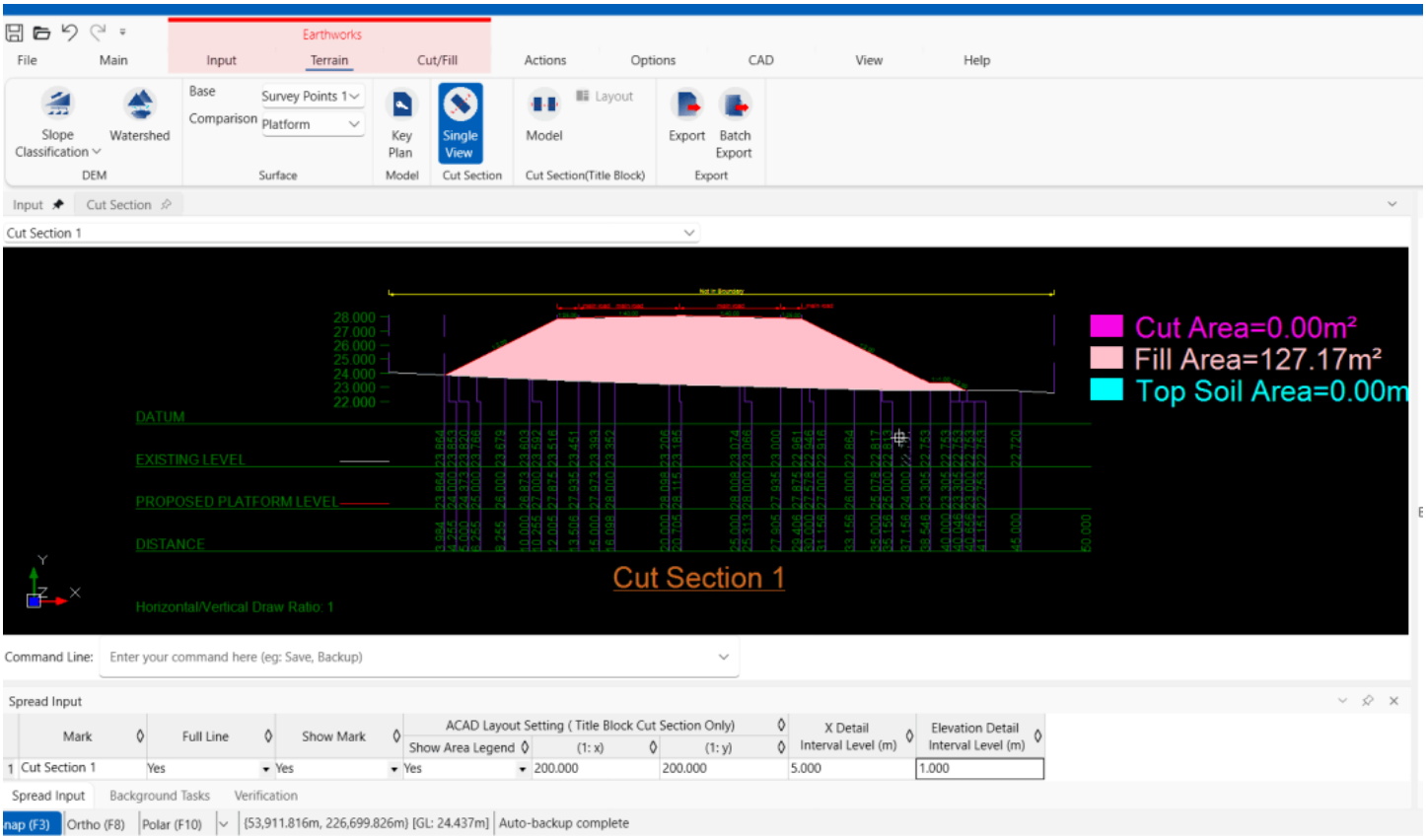
Go to *Earthworks Module > Select Master String/ Individual > Select any cut section > Change the X-Detail Interval / Elevation Detail Interval in the Spread Input.*

Embedded media: https://mes100.com/wp-content/uploads/2022/09/X-Detail-Interval.mp4?_=1

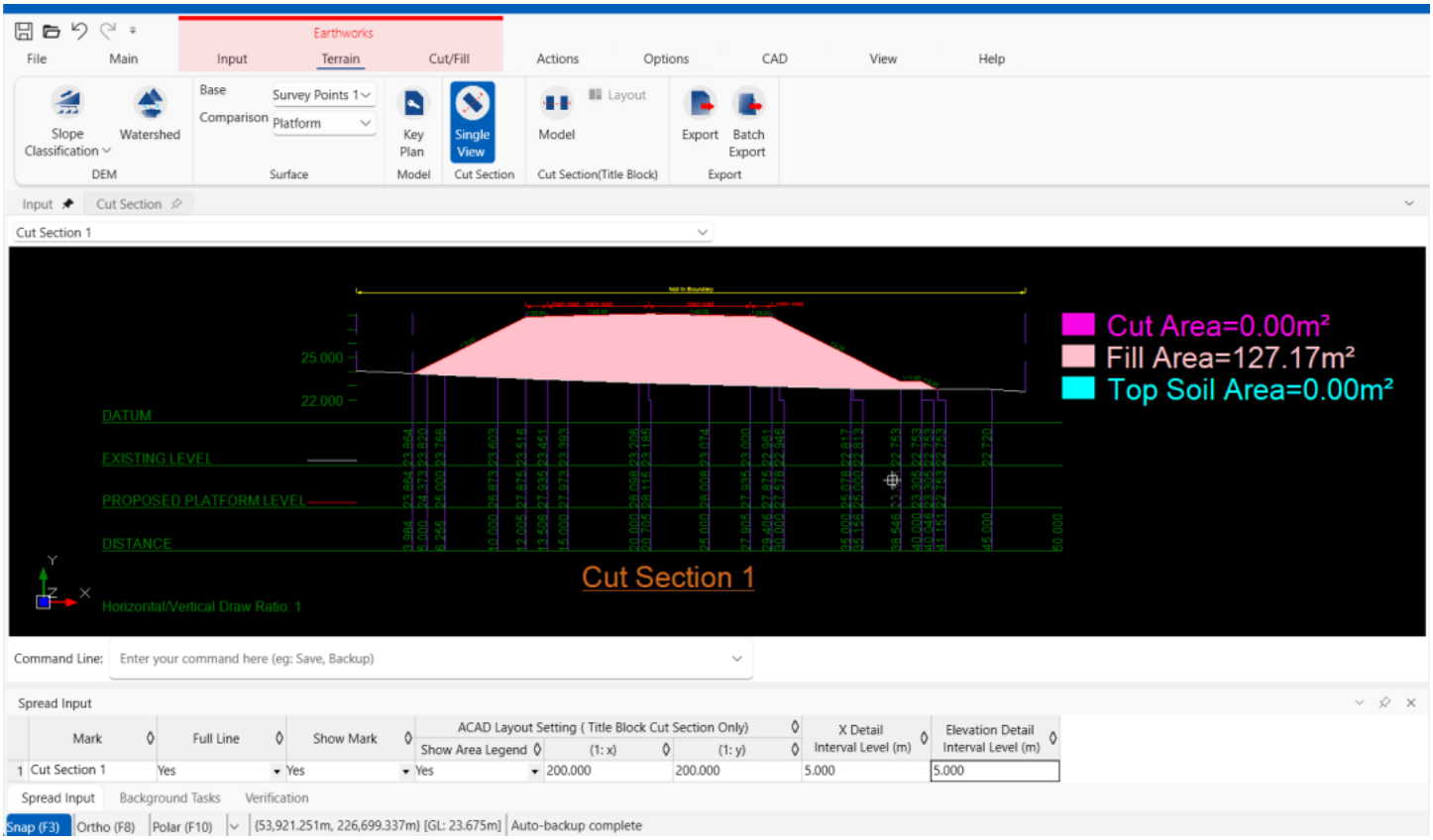
Why Do Extra X-Detail Points Appear When I Adjust the Elevation Interval?

When your cut section includes slanted platforms or inclined entities, adjusting Elevation Detail Interval will cause software to generate extra X-Detail points. The software calculates and displays X-Detail points for the Elevation Interval. Therefore;

1. A lower Elevation Detail Interval (e.g., 1.0m) means more elevation lines, hence more intersections, and thus more X-Detail points.
2. A higher Elevation Detail Interval (e.g., 5.0m) results in fewer lines, producing a cleaner view with fewer X-points.



Numerous X-Detail Points displayed when set Elevation Detail Interval to 1.0m (lower value)



Fewer X-Detail Points displayed when set Elevation Detail Interval to 5.0m (higher value)

3D View

3D View can be viewed before or after analysis. To turn off or on layers such as ‘Contour’, it can be done by ‘tick and untick’ layers at the right hand side box.

In 3D view, users can perform the actions of Zoom Window, Zoom Realtime, Pan, Rotate, Zoom Extents, increase or decrease amplitude. The 3D black box below allows users to control which angle to view the 3D view. The snapshot below shows the view from top.

3D PL View

3D PL View shows the terrain with proposed platforms and is available for view after analysis. Similar to 3D view, users can perform the actions of Zoom Window, Zoom Realtime, Pan, Rotate, Zoom Extents, increase or decrease amplitude. The 3D black box below allows users to control which angle to view the 3D PL view.

Right-mouse click to turn on / off contour.

Export & Batch Export

All outputs and input drawing can be exported by using either button ‘Export’ or ‘Batch Export’.

Button ‘Export’ is to export what is currently being seen on screen, while button ‘Batch Export’ is to export all outputs in a single batch.

Why Actual Earthworks Differ from Estimation

There are many reasons that actual earthwork quantities of a particular job differ from the estimated quantities, such as:

Field Conditions Differ from Design Assumptions

Each site has different existing topography and different subsurface conditions that require different depth of excavation.

Errors in Modelling

Errors can be committed by users during data input. Although earthwork calculations generated by computer aided design software yield better accuracy, the results are only as good as the input data.

Related



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I'm the Benevolent Dictator for Life for MiTS Software cum Editor of this website. Read more here.

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