Technical Note
(TcpMDT_en_v75_sup001_VariableSlopeEsplanade)

Earthwork with the grading of variable slopes

Date of Update:

27/01/2016

Requirements

MDT version: Version 7.0 or higher.
CAD: AutoCAD / BricsCAD / ZWCAD.
**Operating System**: Windows XP / 7 / 8 / 10.

Purpose

Often, when conducting grading work involving ponds, landfills and excavations for construction the slopes need to be adjusted by region in accordance with a limit or boundary we must not surpass or with stability criteria which will also vary by region, whereby it is impossible to define a constant slope for the entire grading.

These slope settings are applicable to all earthwork tools with TCP surfaces MDT version 7.0 or higher.

Details

As starting data we load the "Terrain.sup" surface from MDT example folder N° 9 in the "Variable Slope Grading.dwg" file in which we intend to execute the grading in question at a height of 540 metres.
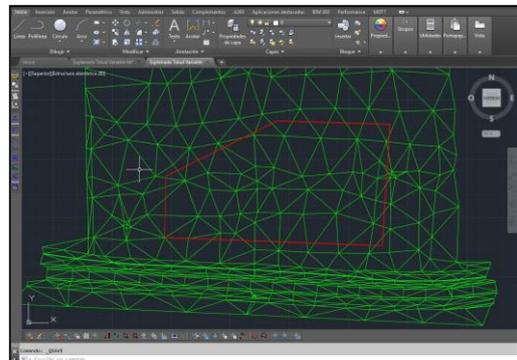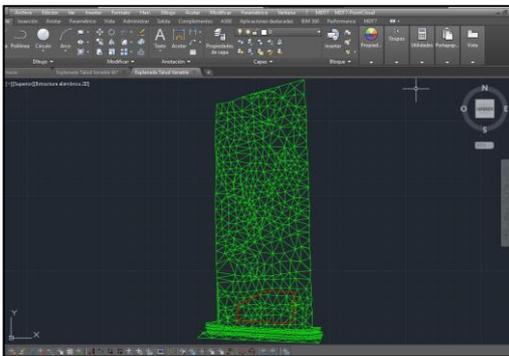
In our case we execute the **"MDT > Surfaces > Earthwork > Grading Height"** command and click on the tab located on the right of the value of the fill slope.
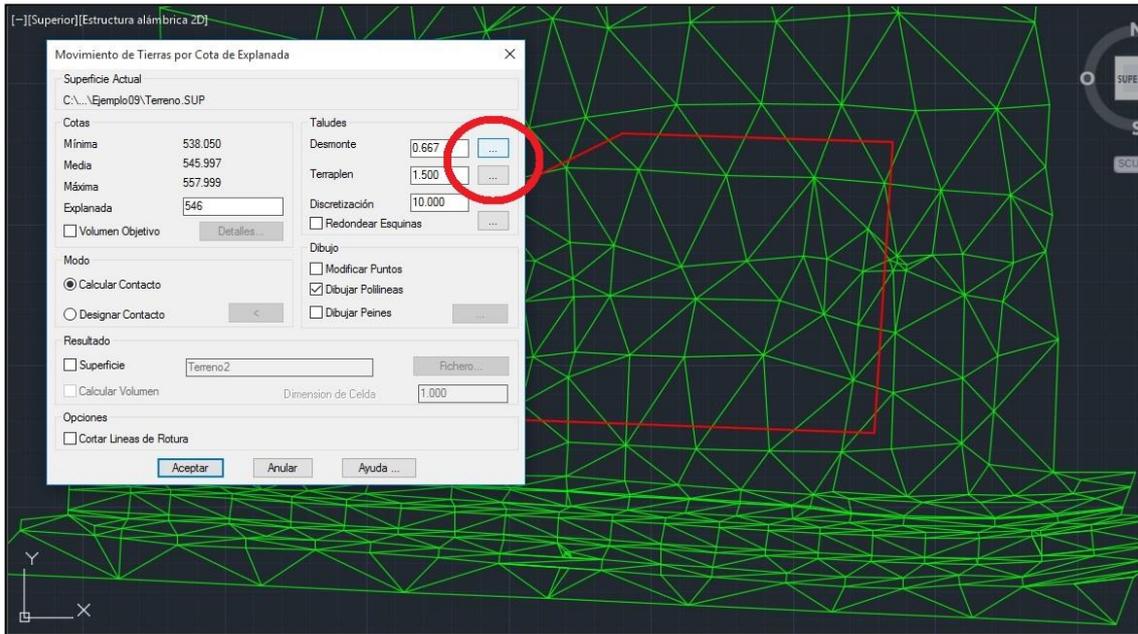
A dialog box will then appear with the slope assigned to the entire platform by default located on the left (a), a preliminary view of the grading to be executed (b) and a box in which to place a new slope value in the bottom left corner (c).
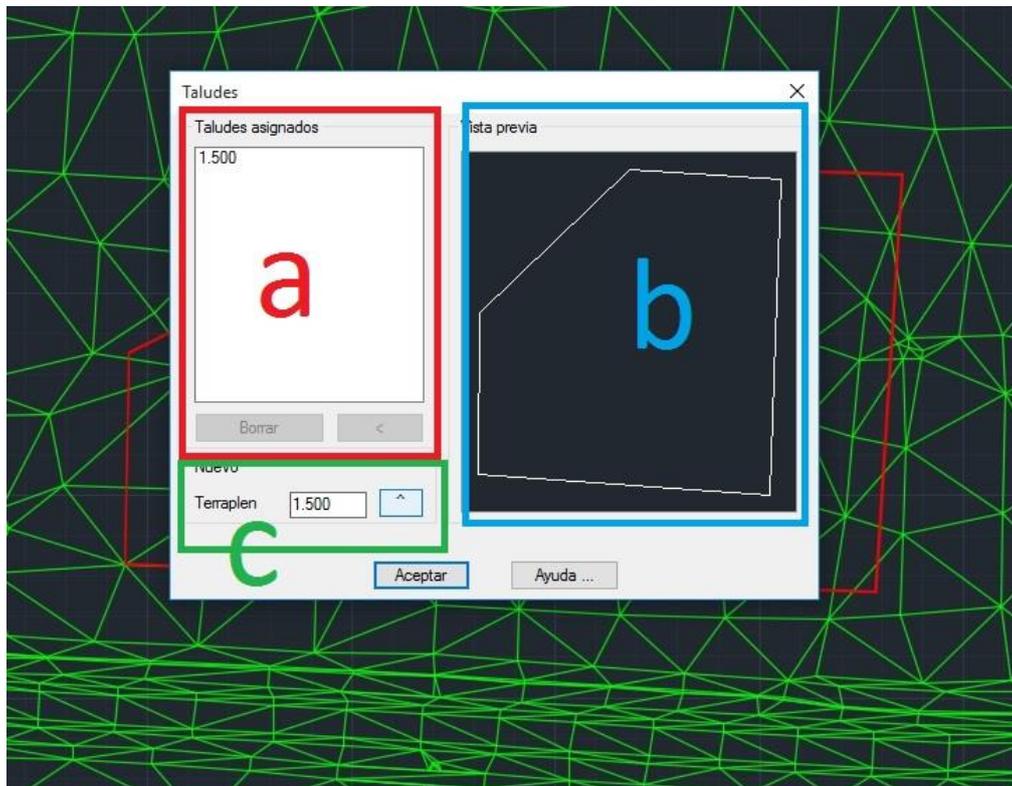

The next step is to insert a slope value in box "C" and click on the right tab with the upward facing arrow to open the active CAD window to enable us to select the area in which we intend to define this slope, designating one or more sections and the sections with an interval by selecting an initial, mid and final point.

MDT sections are defined as the lines drawn between the vertex and the vertex of our grading, numbering the same in an anti-clockwise manner. The sections selected will appear in the preview table (B) in blue while those not selected will appear in white.

For our example we are going to define the slopes for both the cut and fill in accordance with the following sketch:
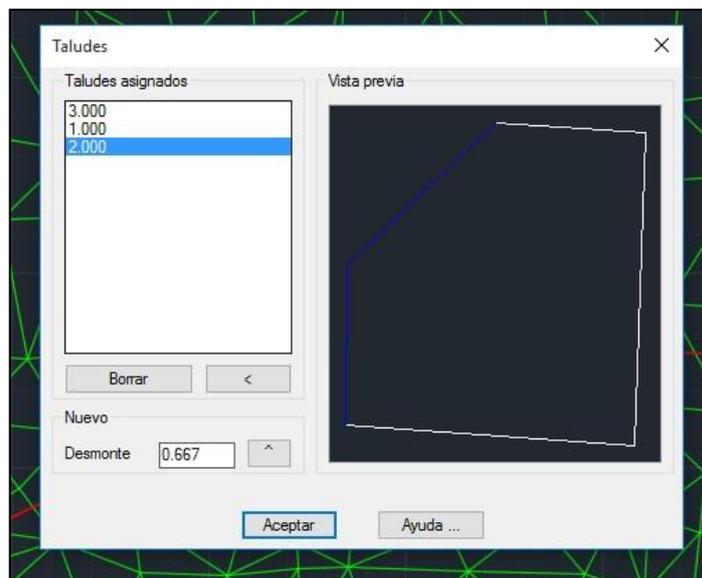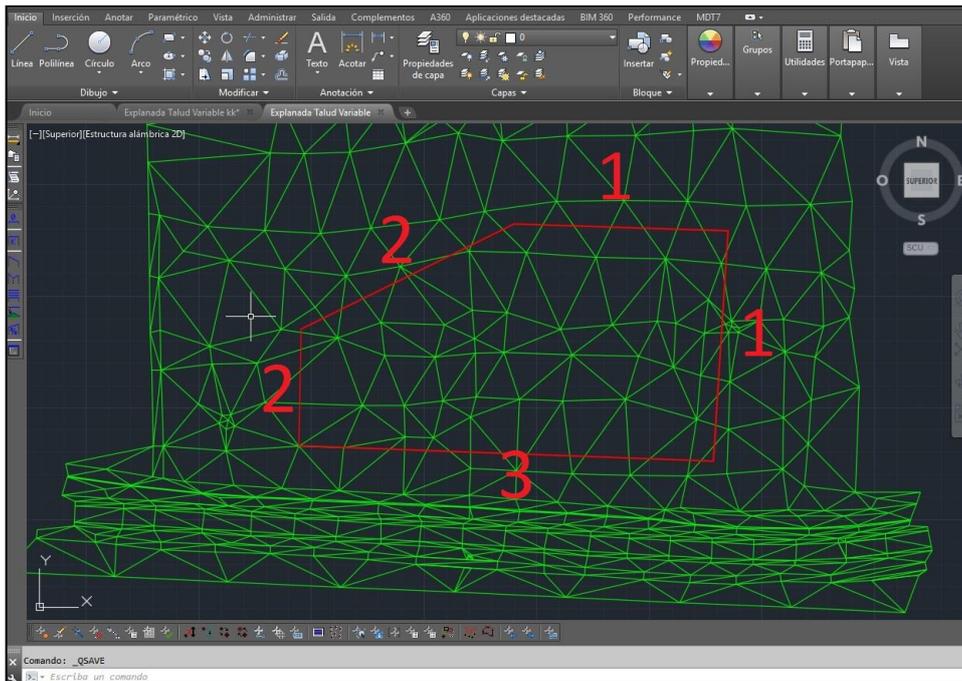
Finally, we execute our grading to a height of 440 metres obtaining the results:
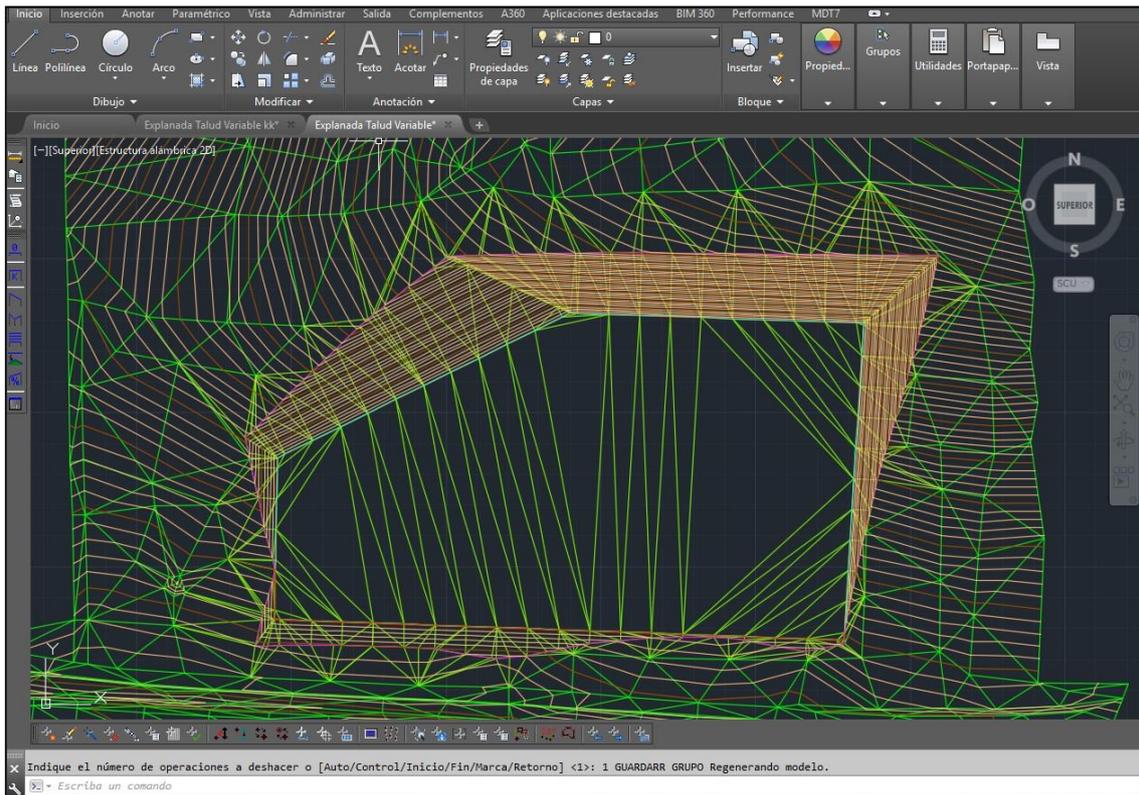
References

Variable Slope Grading.dwg

Terrain.sup

Video