

Imageprocessing with PixelWrench2, Agisoft and QGIS to monitor black grass patches within wheat fields

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PixelWrench

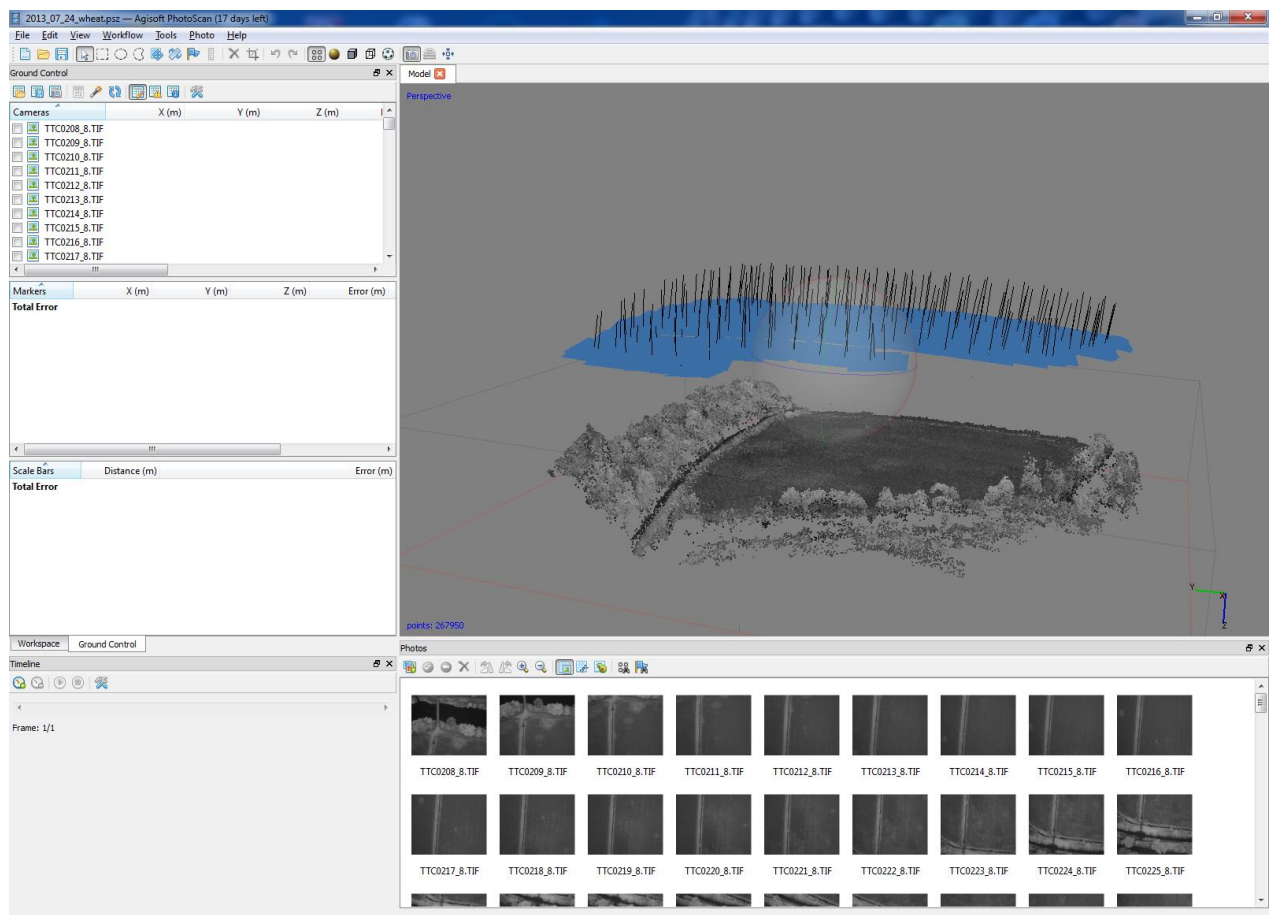
Raw data processing with PixelWrench2 (10min)

Raw Imagery: 6 x 182 raw files (5 bands plus ILS)

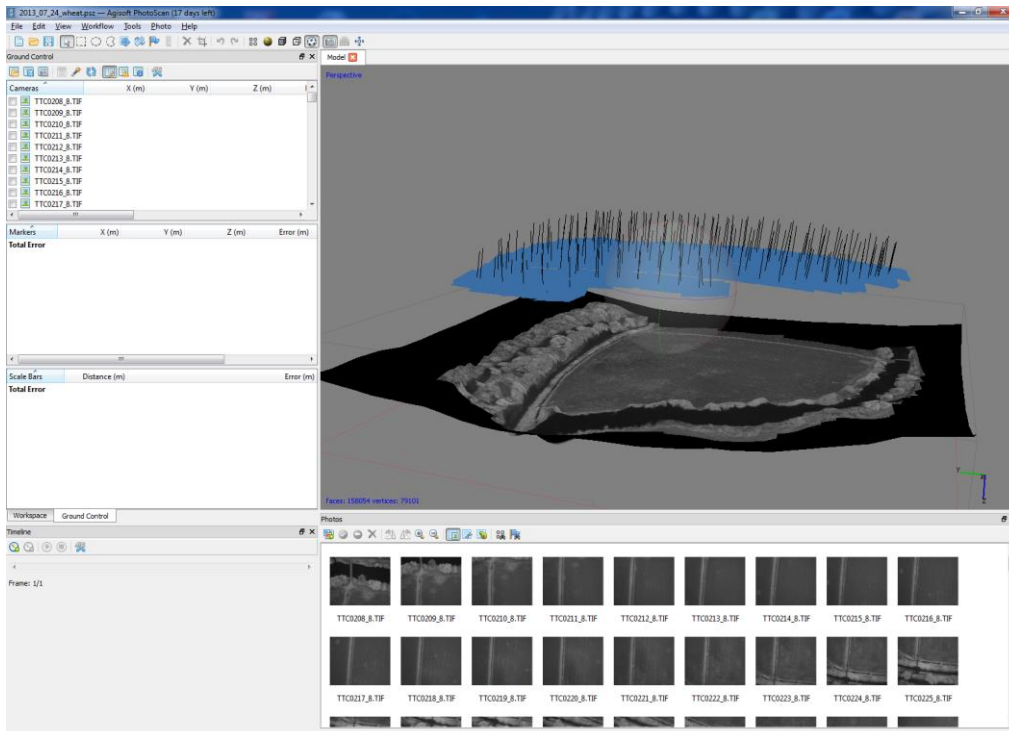
Results: 182 5-band Multiband tiffs (Green, Red, Nir1, Nir2, Nir3)

Agisoft Photoscan Pro

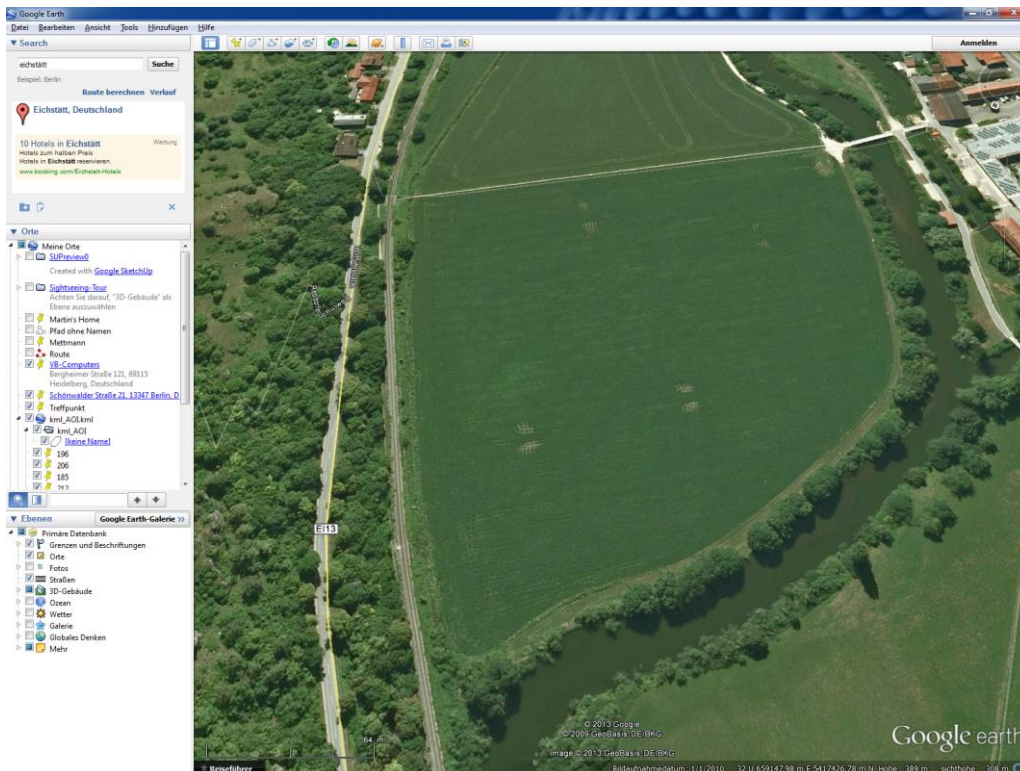
Alignment of xxx 5-Band Images (12min)



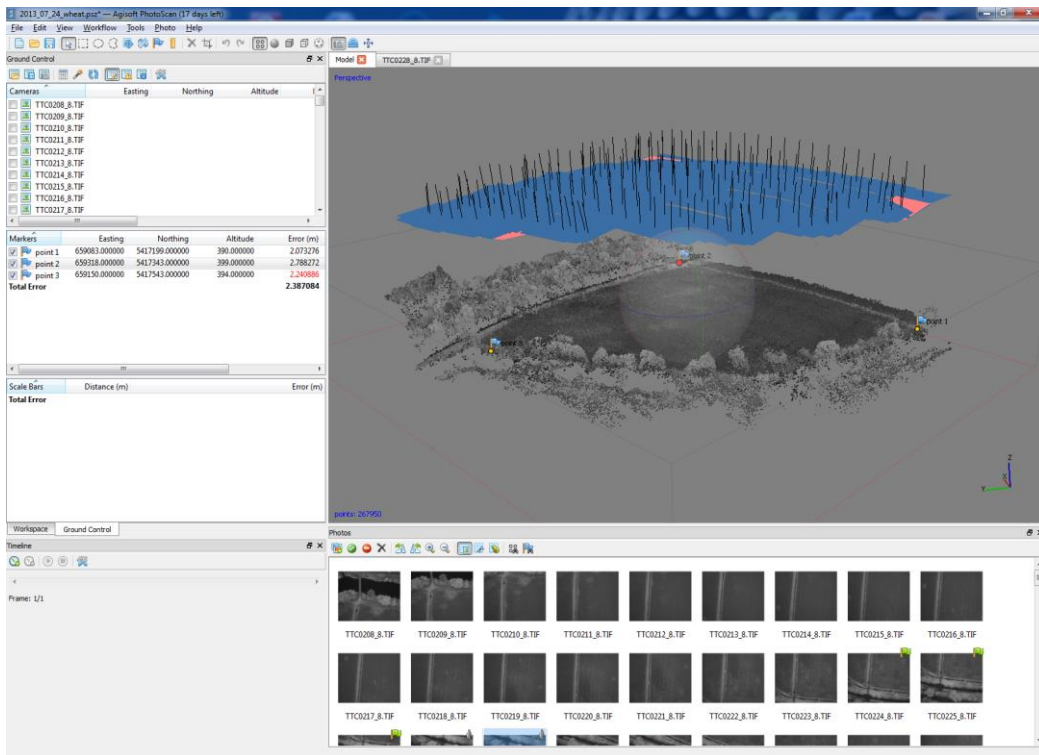
Processing of a low detailed 3D-mesh (3min)



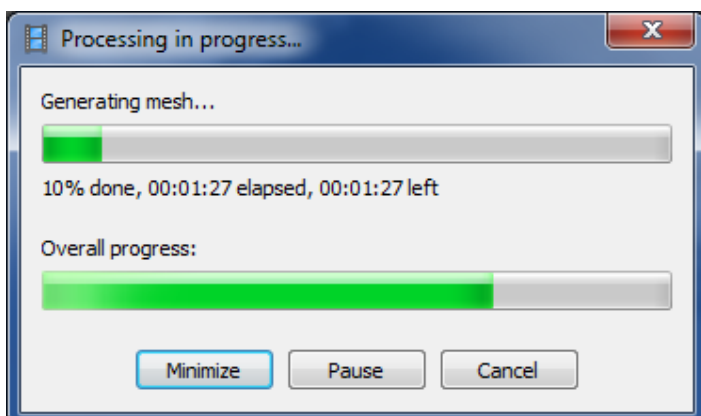
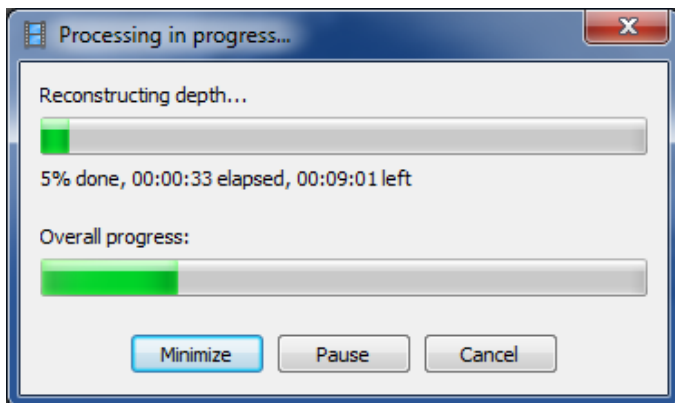
Getting the UTM coordinates (+- 2m) from GoogleEarth (5min)

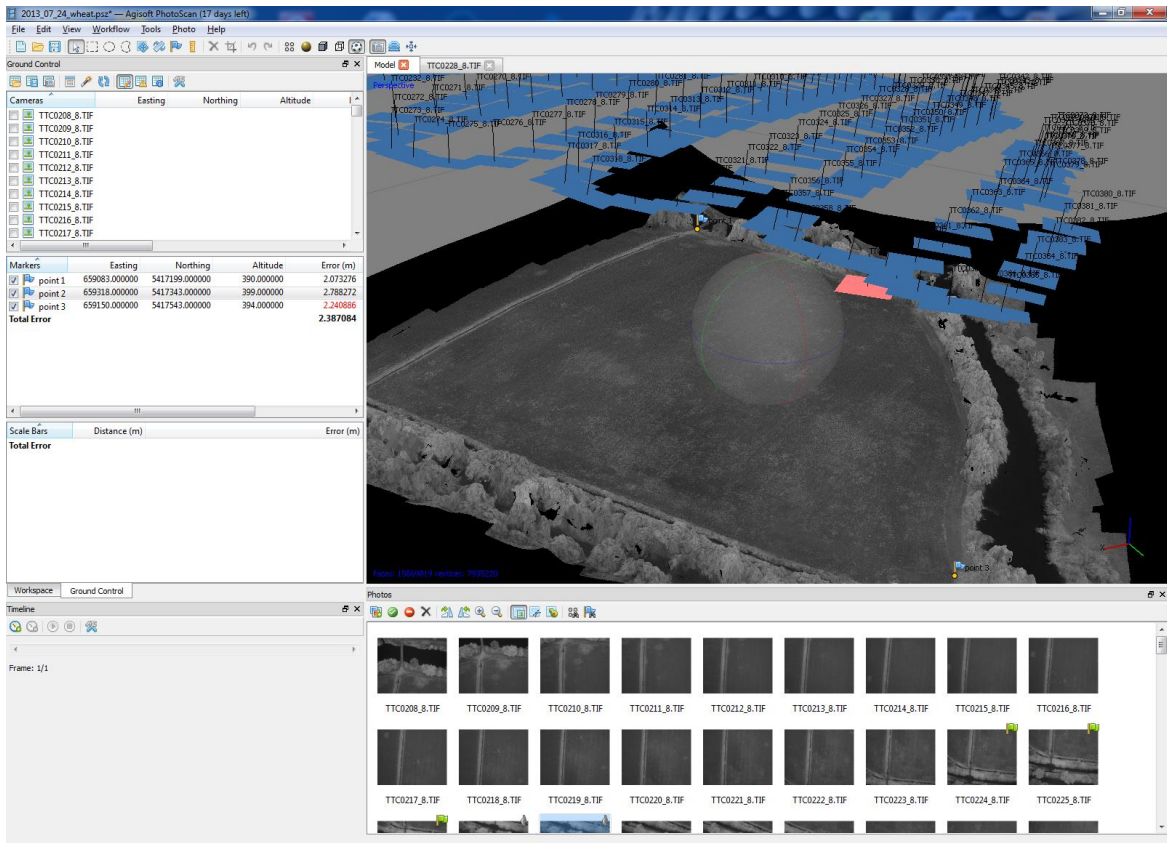


Creating 3 Markers with the GoogleEarth UTM coordinates (**3min**) and placing markers on 3 pairs of images (**5 min**)

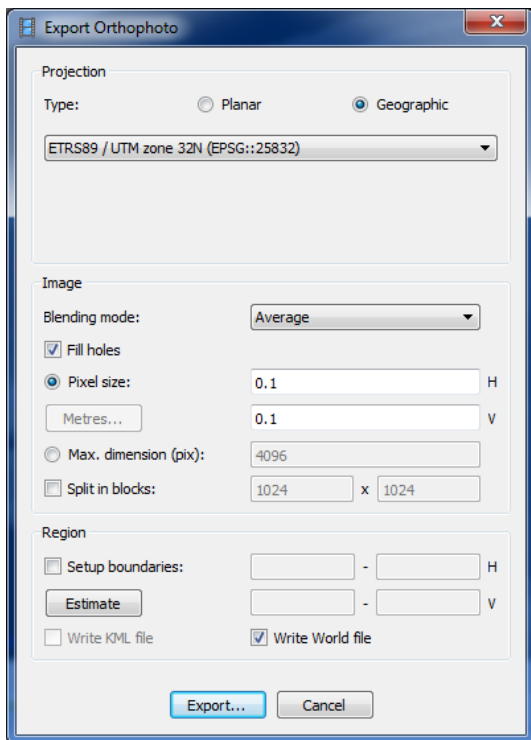


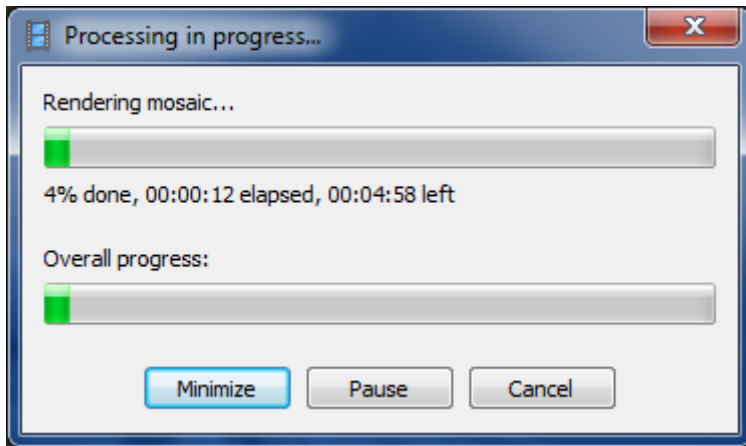
Creating a 3D mesh with high accuracy (10min + 3min)





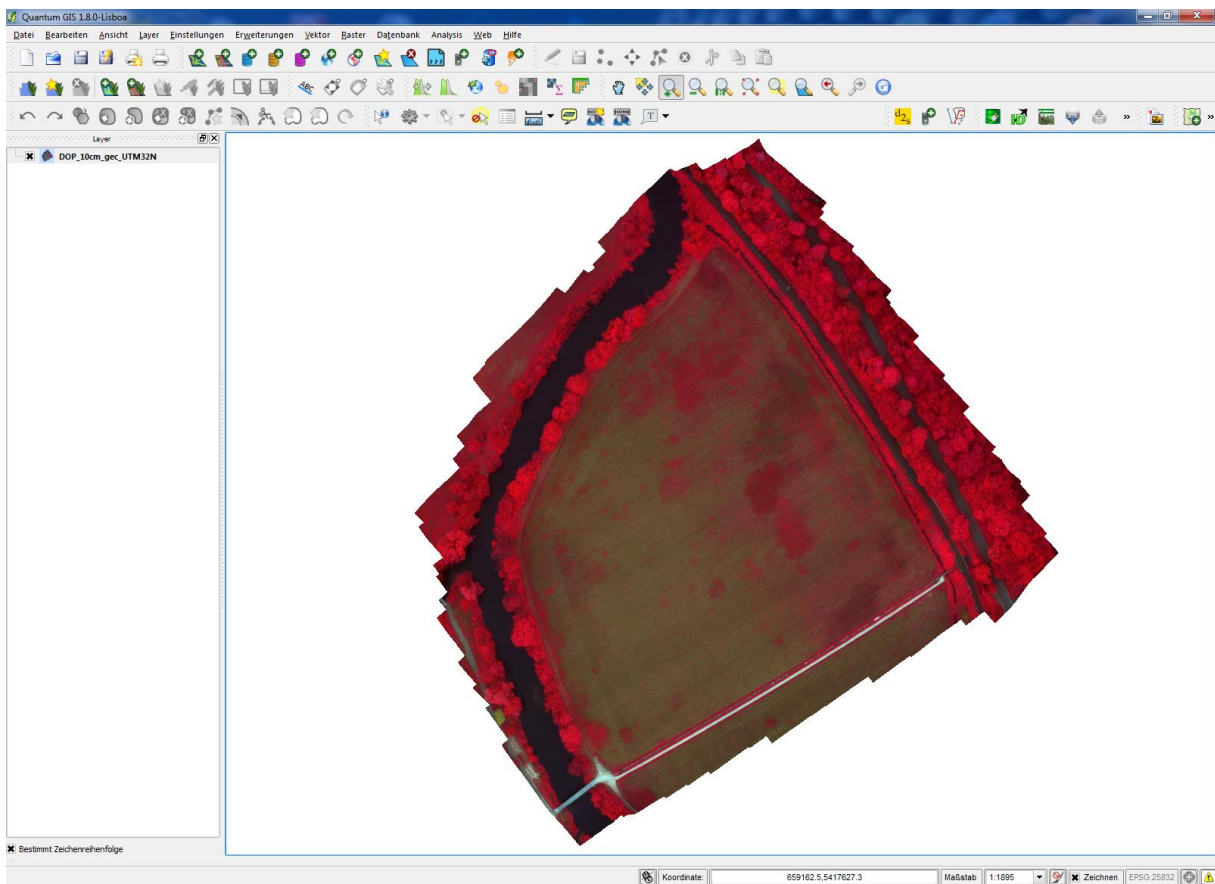
Export of Digital Ortho-Photo (DOP) with 10cm Pixel resolution (5min)



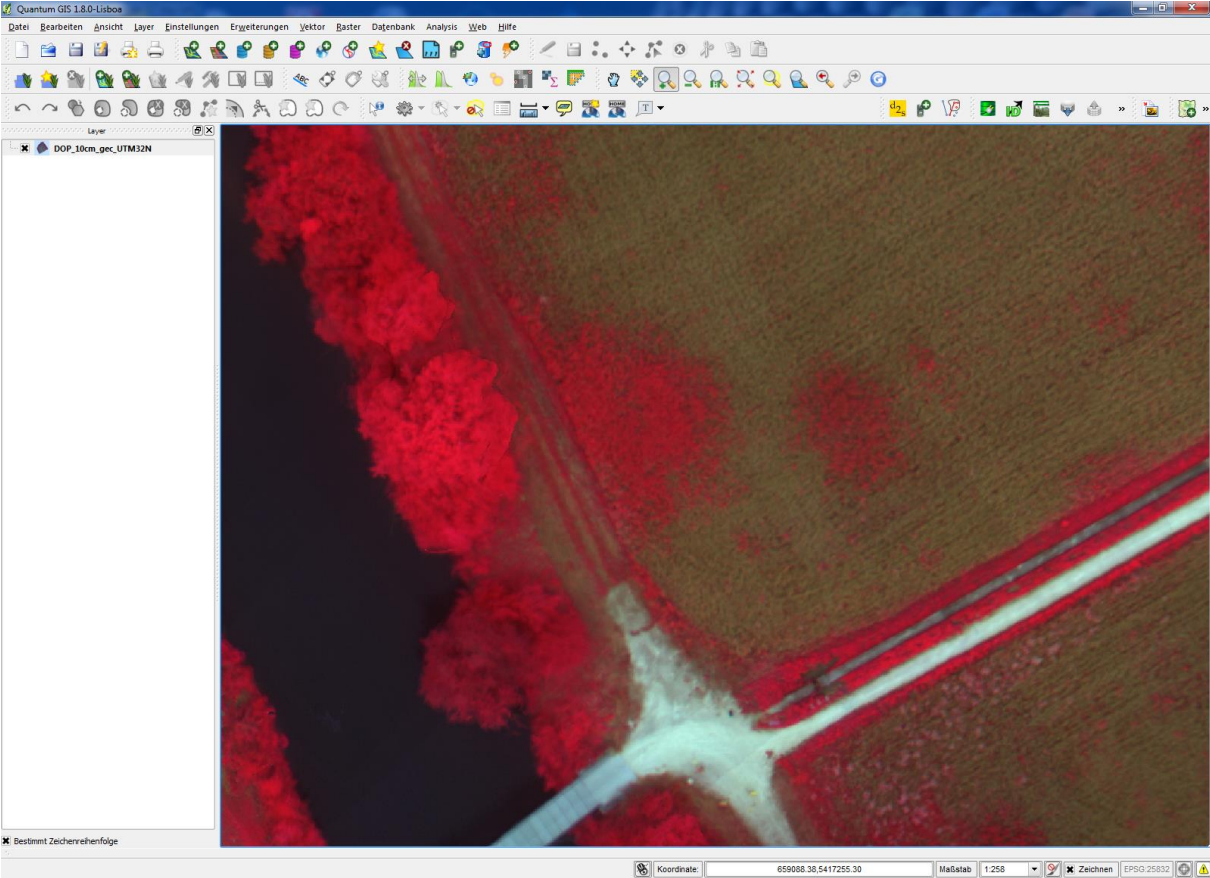


QGIS

Loading DOP_10cm_gec_UTM32N.tif



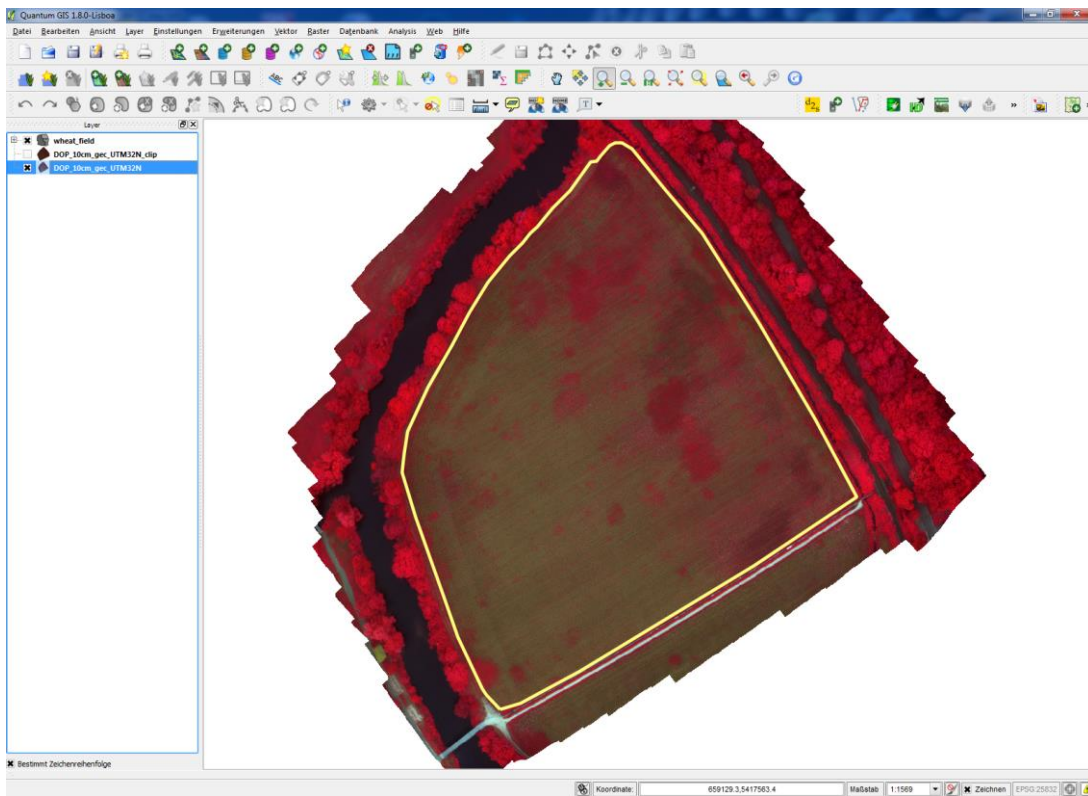
RGB = NIR,RED, GREEN with zoom to take of area near the little bridge. Black grass patch visible in NIR,RED,GREEN composite.



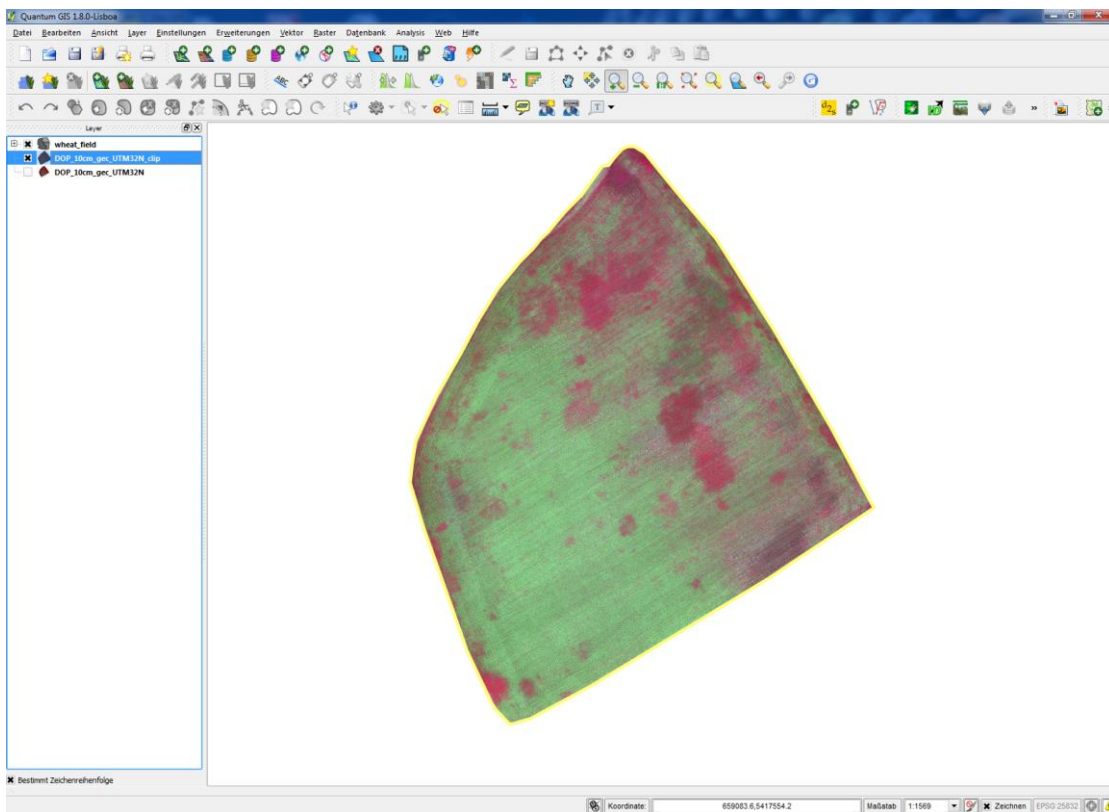
Photo, showing the black grass patch near the bridge



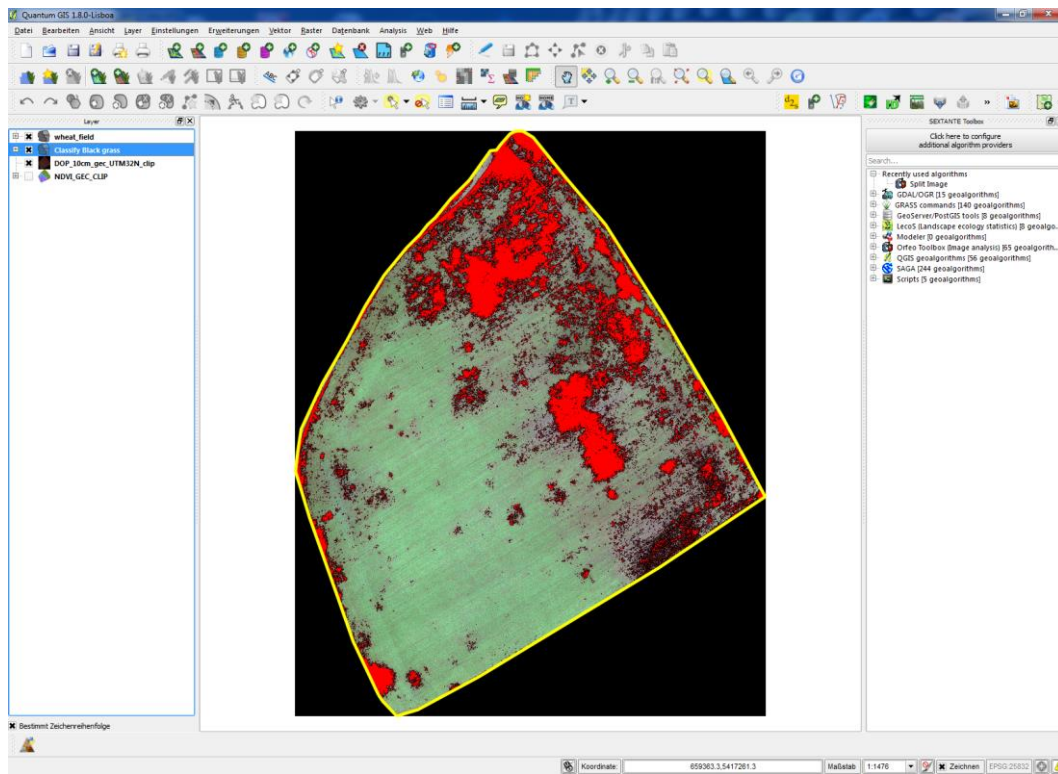
Loading a boundary shape file



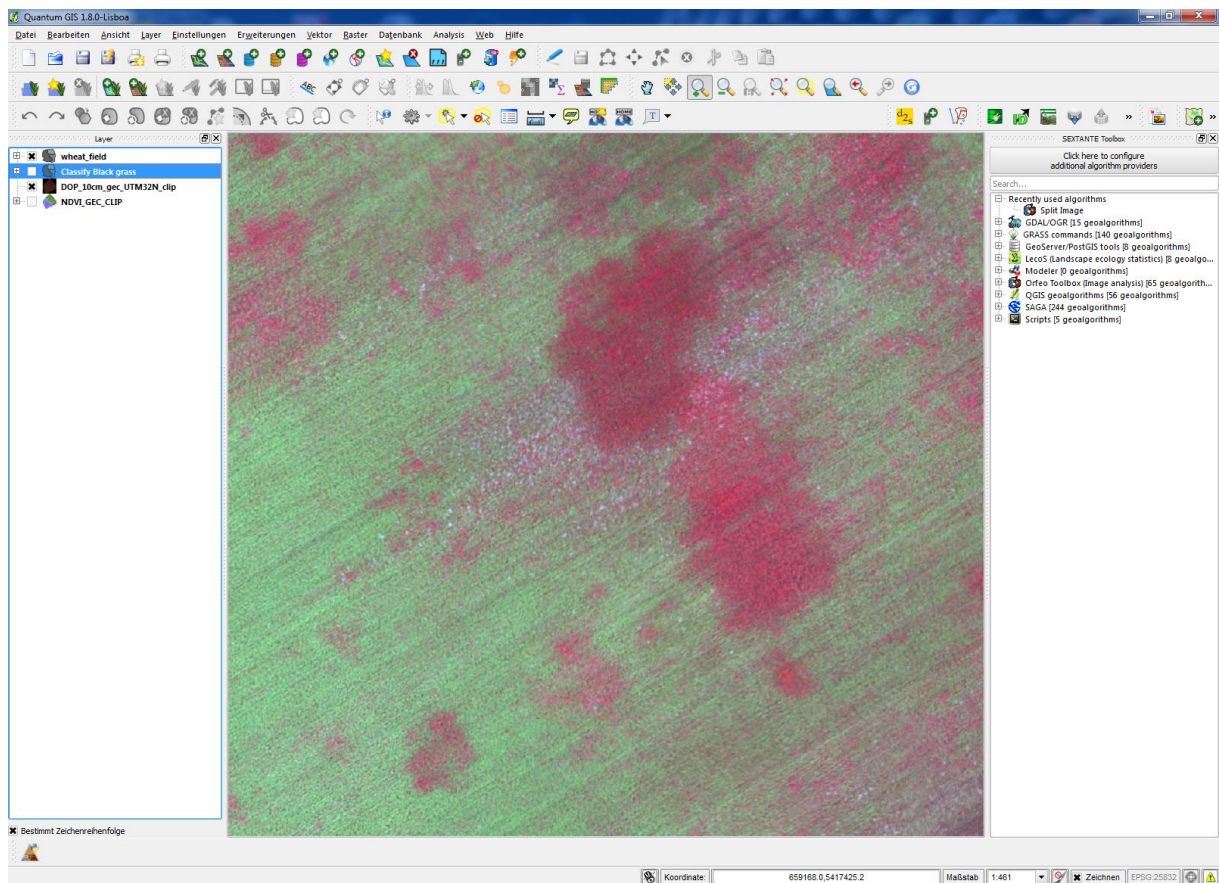
Clipping the DOP file with the boundary vector



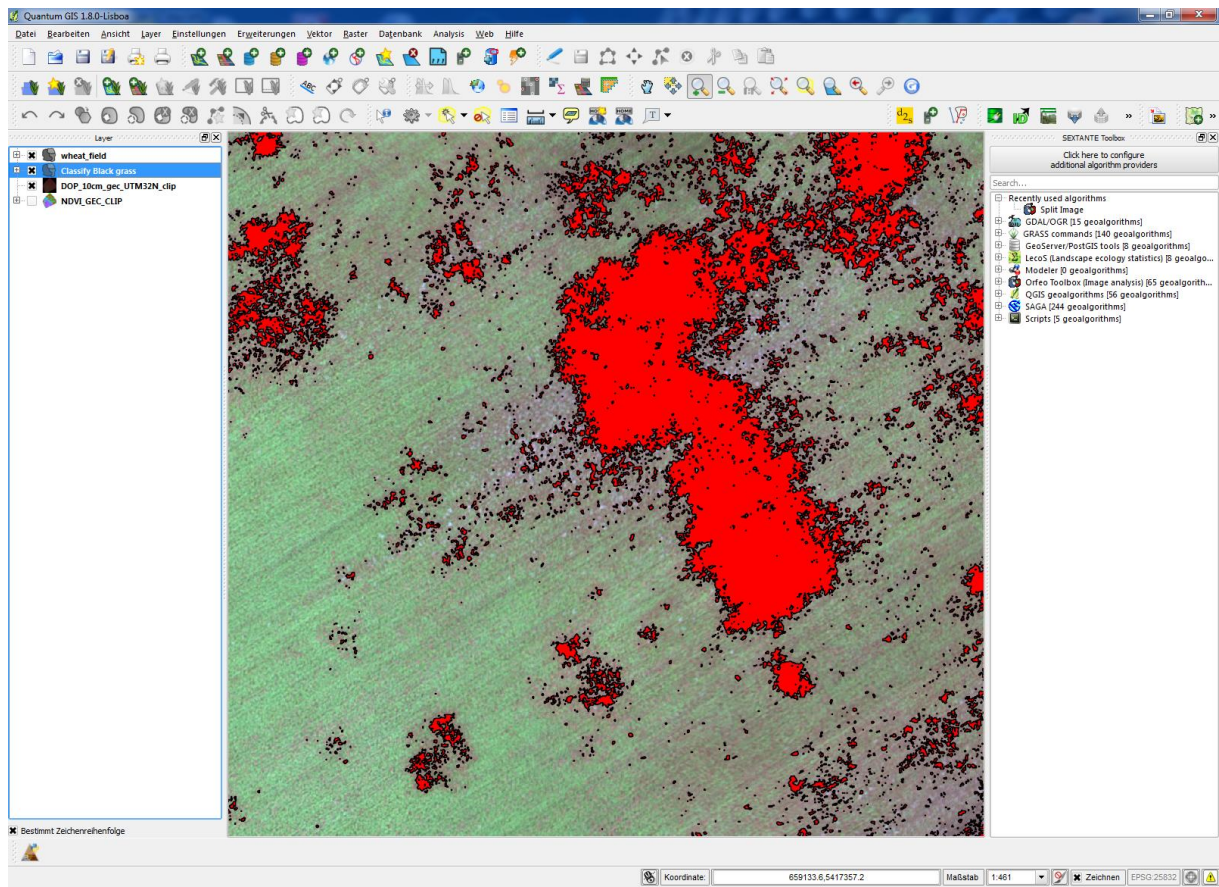
Results of black grass classification



DOP without Vector Layer



DOP with overlaid vector layer



Total processing time in QGIS: **5min**