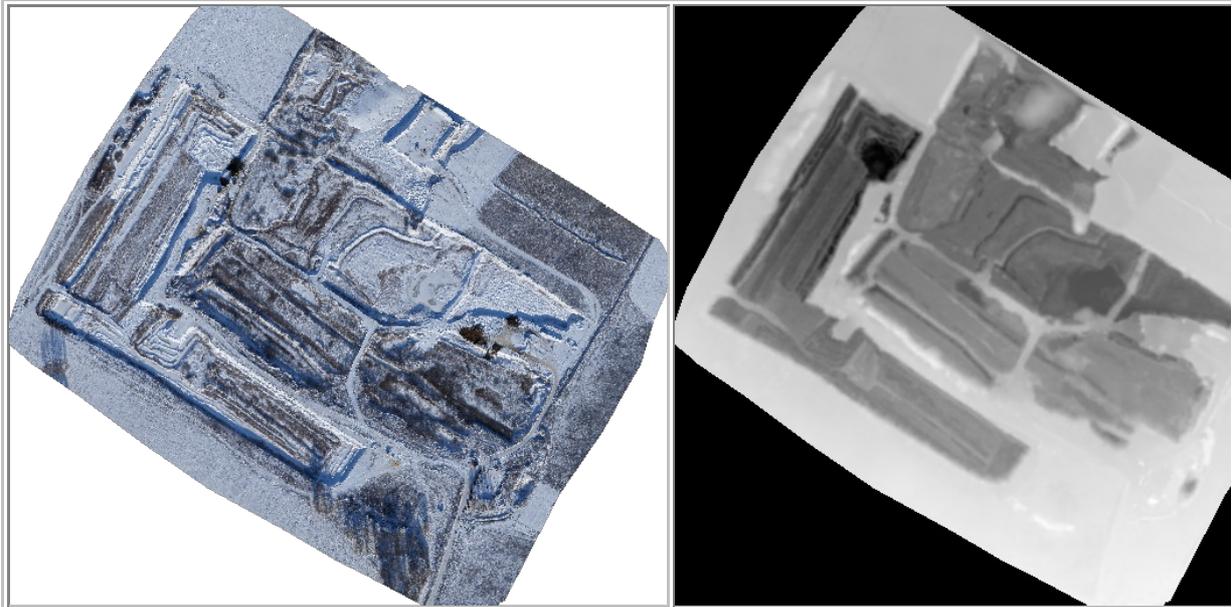


# Automatic Reconstruction Report (version 1.1.11965)

[pdf](#)

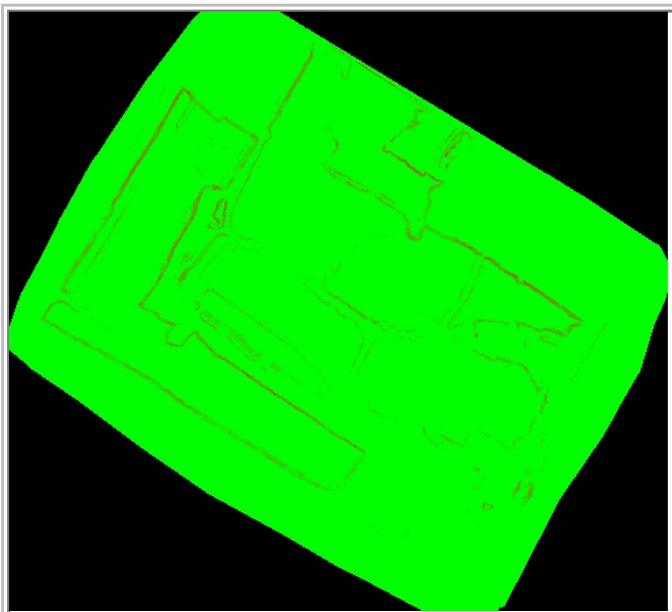


**Figure 1:** Ortho mosaic (left) and (right) the corresponding digital elevation model (DEM).

## Overall Quality



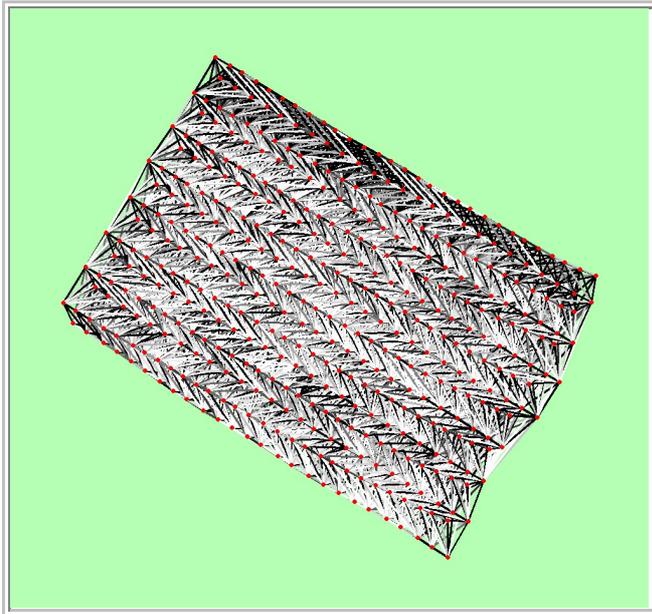
**Figure 2:** Completeness refers to the percentage of original images that are included in the final ortho image. A low value might indicate insufficient overlap between the original images. The accuracy of the geotags relates to the quality of the geotags that are associated with each original image (see Figure 6).



**Figure 3:** Quality of the ortho mosaic. Red indicates areas where the ortho mosaic and the digital elevation model could contain artefacts, e.g. non-linear building edges.

## Original Image Dataset

The dataset contains 436 original images.



**Figure 4:** This connectivity graph displays the number of potential keypoint matches (color coded in gray values) between the original images. A high quality result can be obtained if each original image is connected with sufficient matches to the neighbouring images along all directions. The large red dot corresponds to the starting original image. The green line follows the original image geotags over time. Keypoint matches consist of distinct images keypoints that are visible in two images and for which a correspondence could be established.

## Result

The ortho mosaic is composed from 436 out of 436 original images.  
 The ortho mosaic covers an area of 0.58 sq. km / 58.17ha / 0.22 sq. mi.



**Figure 5:** The final connectivity graph displays verified keypoint matches between the original images after bundle block adjustment, which is a global optimisation of the position and orientation of the original images and the digital elevation model.

	number of keypoint observations per original image
median	9895
min	3917
max	24703
mean	13113.9

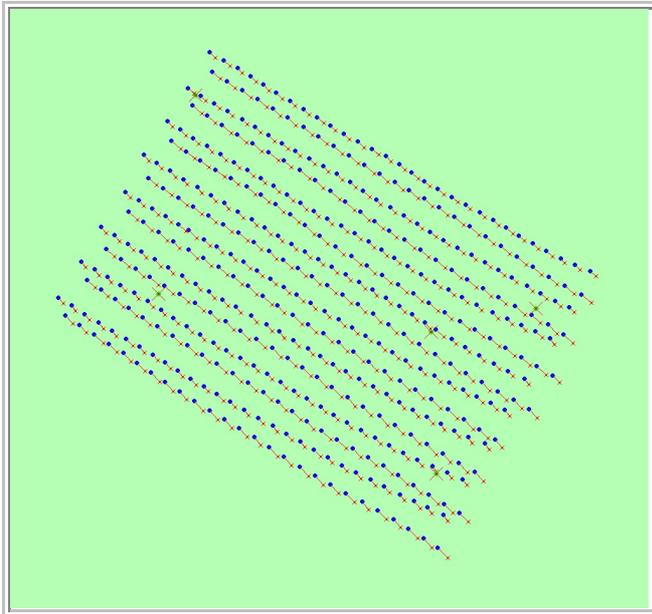
	number of 3D points observed
in 2 - 3 images	855270
in 4 - 5 images	186878
in 6 - 7 images	115127
in 8 - 9 images	76851
in 10 - 11 images	61396
in 12 - 13 images	45053
in 14 - 15 images	21455
in 16 - 17 images	3320
in 18 - 19 images	294
in 20 - 20 images	6

Matching statistics for the bundle block adjustment.

number total keypoint observations for bundle block adjustment	5717650
number total 3D points for bundle block adjustment	1365650
mean reprojection error	0.661144 [pixels]

Characteristics of bundle block adjustment.

### Georeference



**Figure 6:** Offset between image GPS tags (small red crosses) and estimated positions of the original images (small blue dots) as well as the offset between the GCP's (large red crosses) and their estimated positions (large green dots) in the horizontal plane.

GCP name	error X [m]	error Y [m]	error Z [m]
GCP: op1	0.0180412	0.0242314	0.122099
GCP: op3	0.0192156	0.0354813	0.23458
GCP: op5	0.00297996	0.0178478	0.236156
GCP: op6	0.0101251	0.0243338	0.107059
GCP: op8	0.0266356	0.00312565	0.211898
mean	0.0153995	0.021004	0.182358
sigma	0.00812225	0.0105896	0.0562052

Localisation accuracy of the individual Ground Control Points (GCP) in metres, their mean error distance and the mean errors in the three coordinate directions.

0 out of 5 GCP's have been labeled as inaccurate (see Figure 6).

geotag localisation variance	sigma [m]
longitude direction (x)	3.11327
latitude direction (y)	2.42656
altitude direction (z)	1.5119

Localisation accuracy of the geotags in metres. 6 out of 436 original image geotags have been labeled as inaccurate (see

Figure 6).