



DRONES - LASERSCANNING - AR

GEBRUIK OP DE WERF

Bart Janssens
Algemeen Directeur – Franki Construct

TOEPASSINGEN OP DE WERF

AANPAK FRANKI CONSTRUCT

1

Drones



2

3D Scanner



3

360° Camera



4

SiteVision



PHANTOM 4 RTK

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All Sites > Waterlink Rumst >

#2699 - Survey Essential (19 Sep 2019) **COMPLETED**

GCPs

Manage site

Filters

Switch View Mode

Files



Annotate/Measure

View

Export



Layers

- > Annotations [1]
- > Boundaries
- > Site Regions
- > Site Overlays
- > Photos
- > Digital Surface Model
- > RGB Orthomosaic
- > Base Layer





GCPs

Manage site

Filters

Switch View Mode

Files



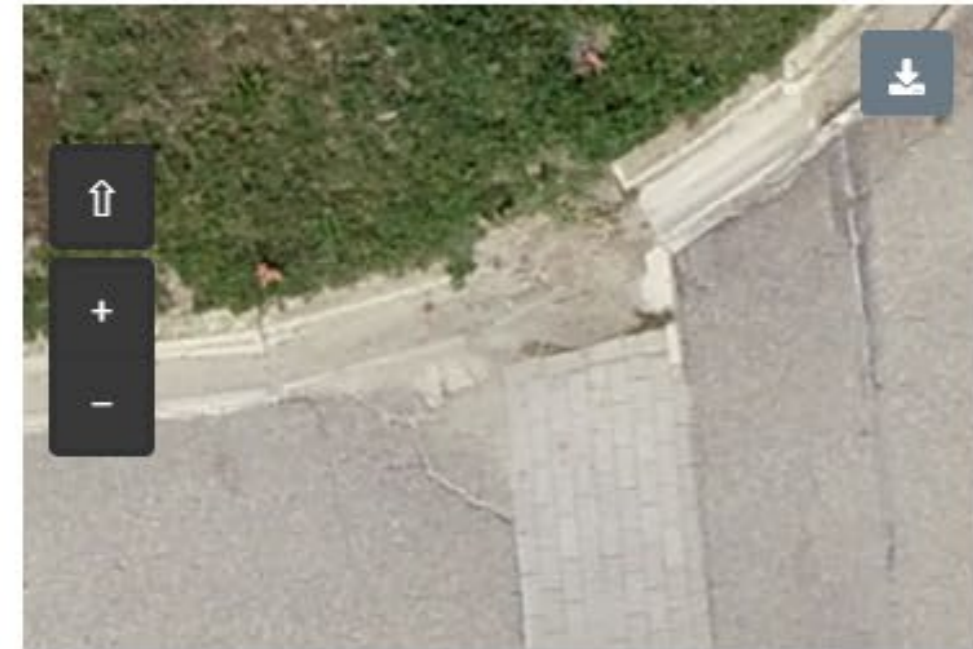
Annotate/Measure

View

Export



RGB



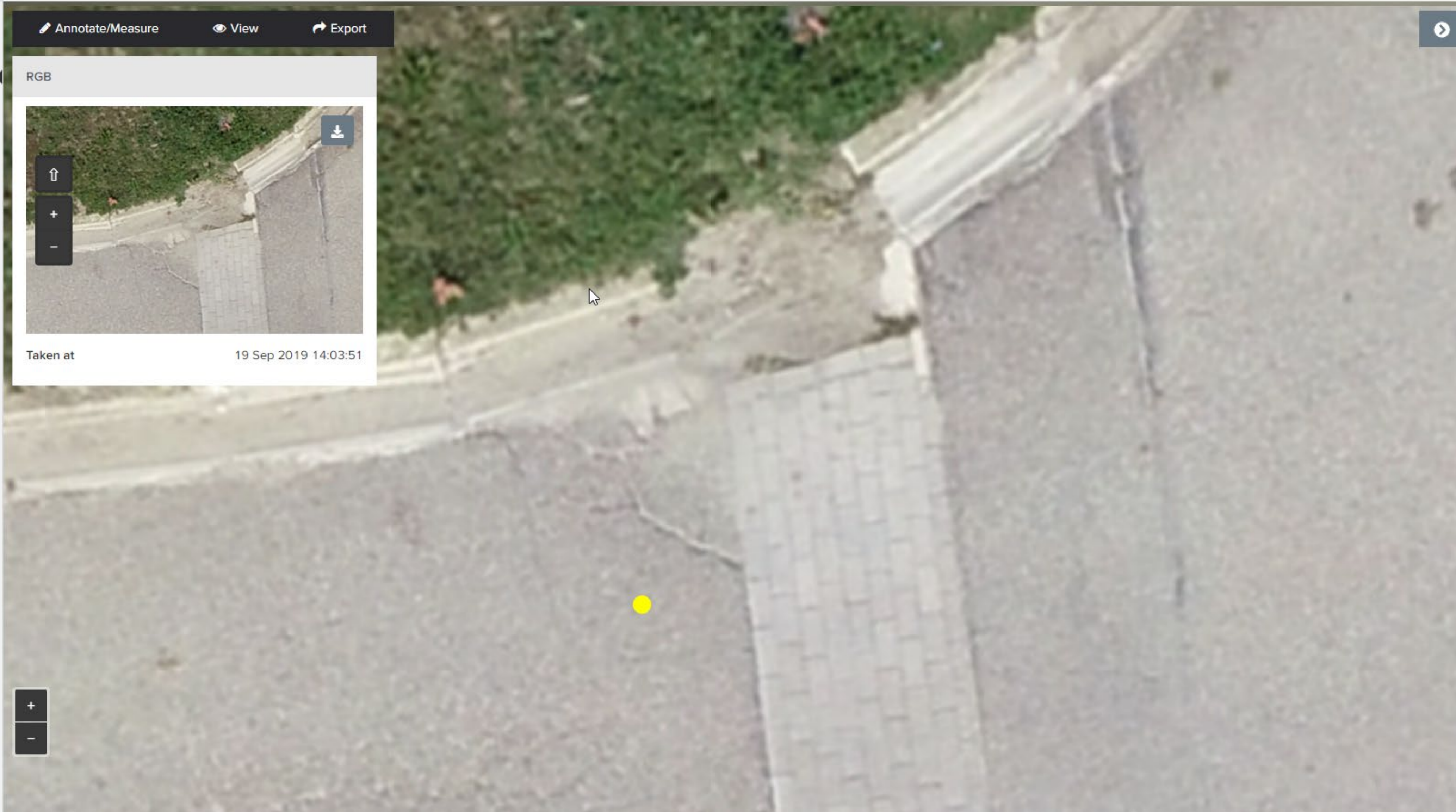
Taken at

19 Sep 2019 14:03:51



Layers

- Annotations [1]
- Boundaries
- Site Regions
- Site Overlays
- Photos
 - Transparency
 - RGB [669]
- Digital Surface Model
- RGB Orthomosaic
- Base Layer





GCPs

Manage site

Filters

Switch View Mode

Files



Annotate/Measure

View

Export

Layers

Annotations [1]

Boundaries

Site Regions

Site Overlays

Transparency

grondopslag

Photos

Digital Surface Model

RGB Orthomosaic

Base Layer





All Sites > Waterlink Rumst >

#3696 - Survey Essential (22 Apr 2020) COMPLETED

GCPs

Manage site

Filters

Switch View Mode

Files



Annotate/Measure

View

Export



Polygons

Line

Point

Photo



Layers

- Annotations [2]
- Boundaries
- Site Regions
- Site Overlays
- Photos
- Digital Surface Model
- RGB Orthomosaic
- Transparency
- Base Layer
- Transparency
- Satellite
- Streets





All Sites > Waterlink Rumst >

#3696 - Survey Essential (22 Apr 2020) COMPLETED

GCPs

Manage site

Switch View Mode

Files

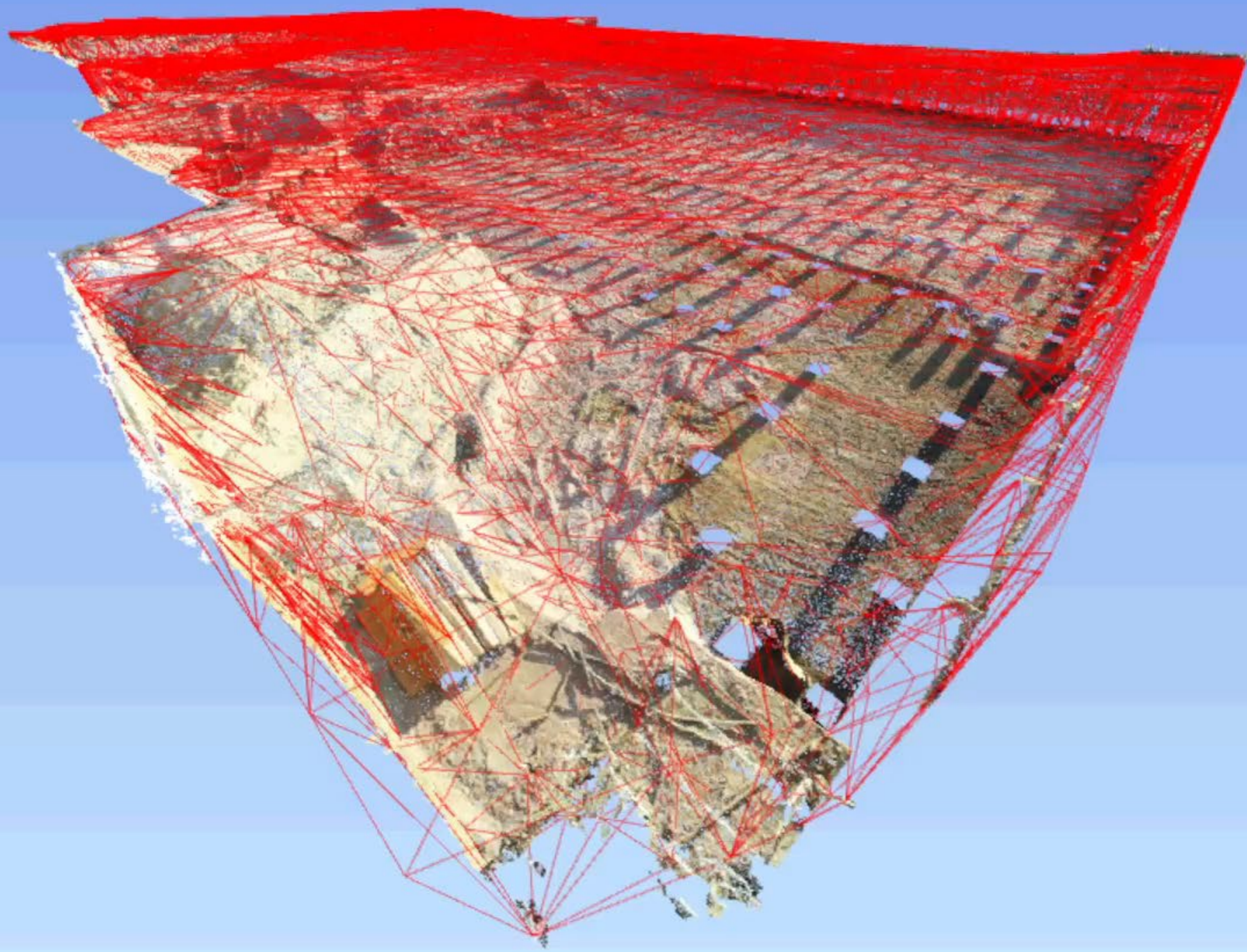


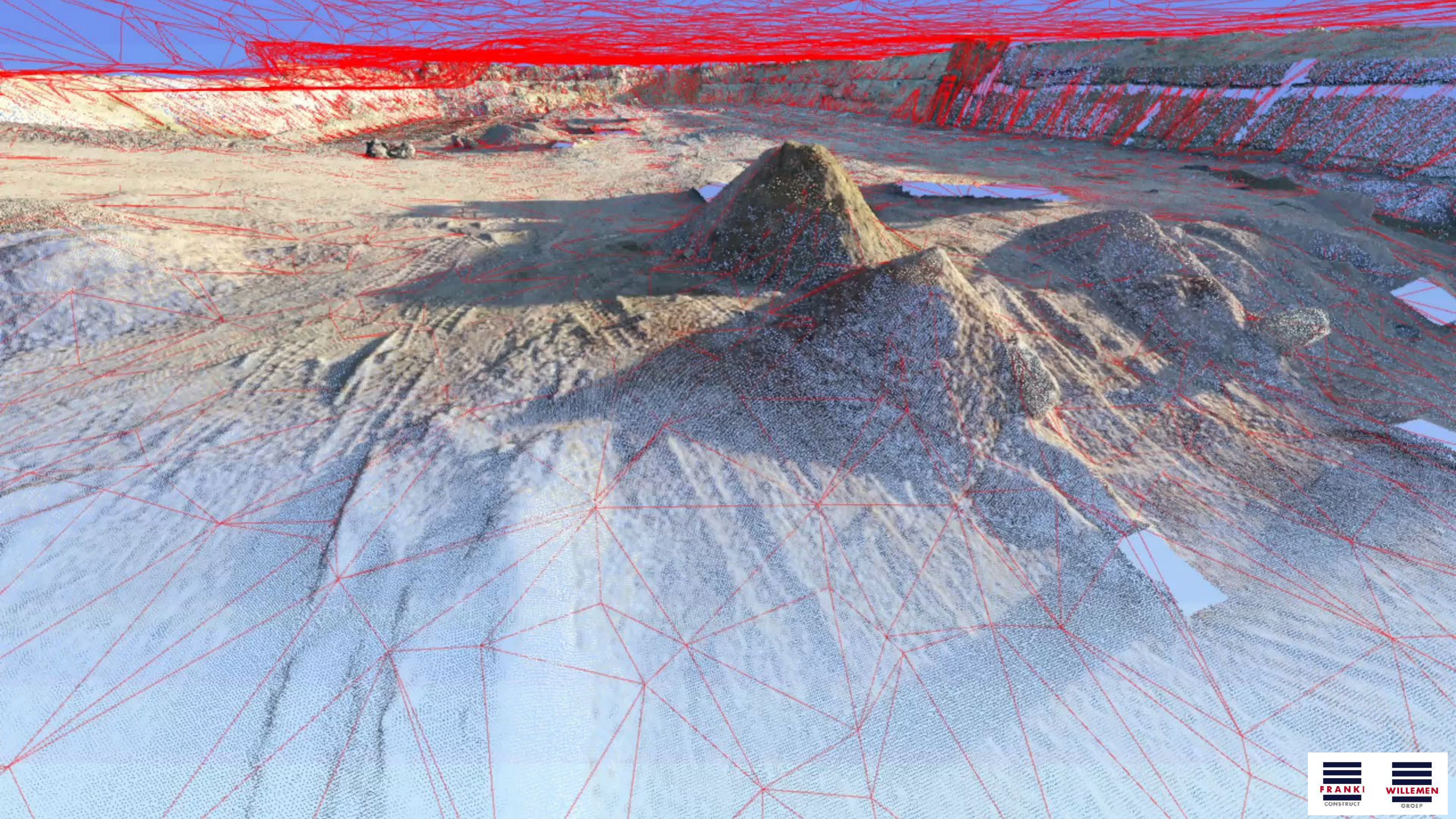
Annotate/Measure Export

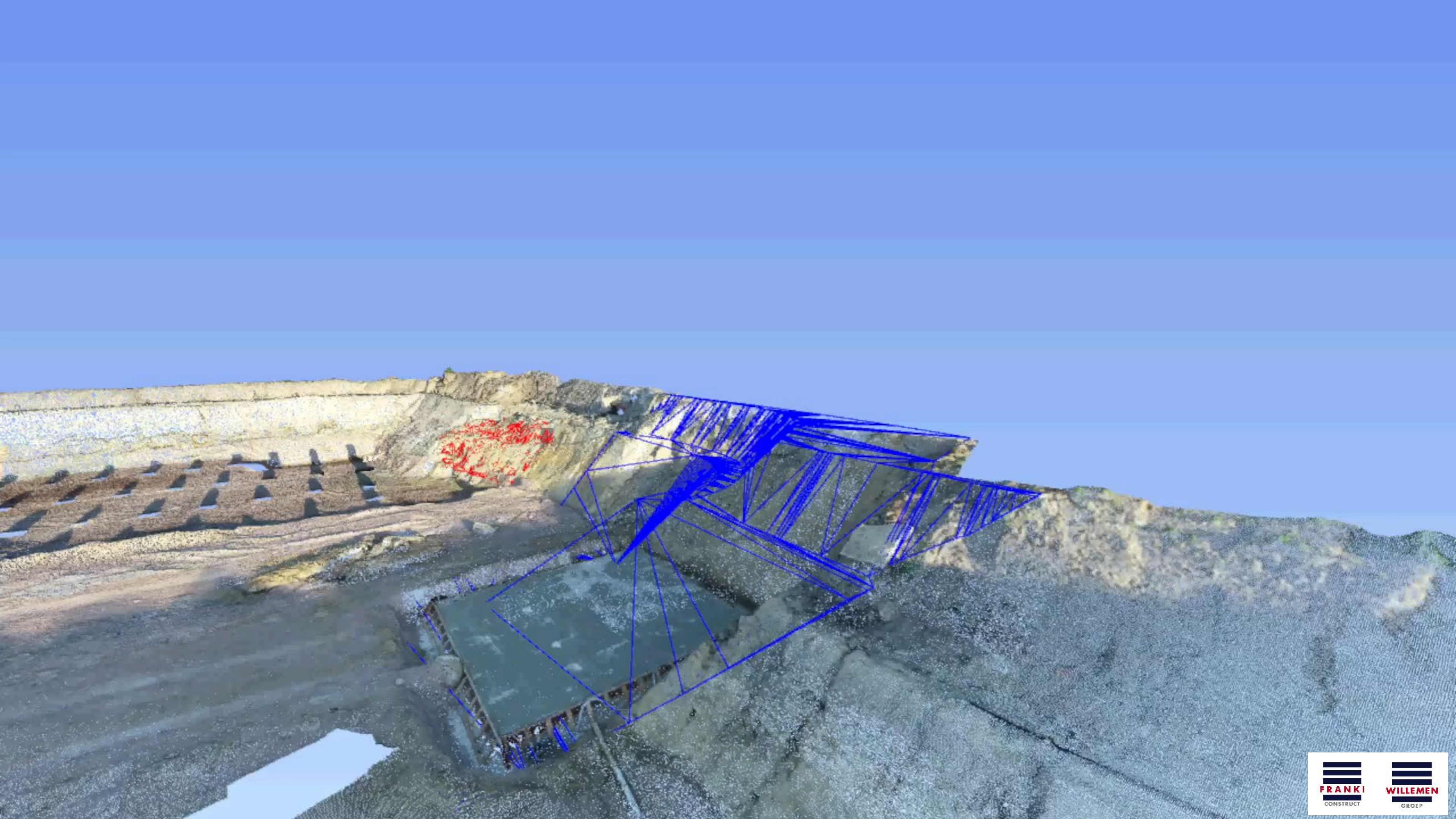
Layers

- > Annotations
- > 3D Model
- > Point Cloud











Annotate/Measure View Export



- Layers
- > Annotations [0]
 - > Boundaries
 - > Site Regions
 - > Site Overlays
 - > Photos
 - > Digital Surface Model
 - > RGB Orthomosaic
 - > Base Layer





All Sites > Waterlink Rumst >

#6584 - Survey Essential (23 Sep 2021) COMPLETED

GCPs Manage site Filters Switch View Mode Files



Annotate/Measure View Export



Swipe Compare X

OPERATION

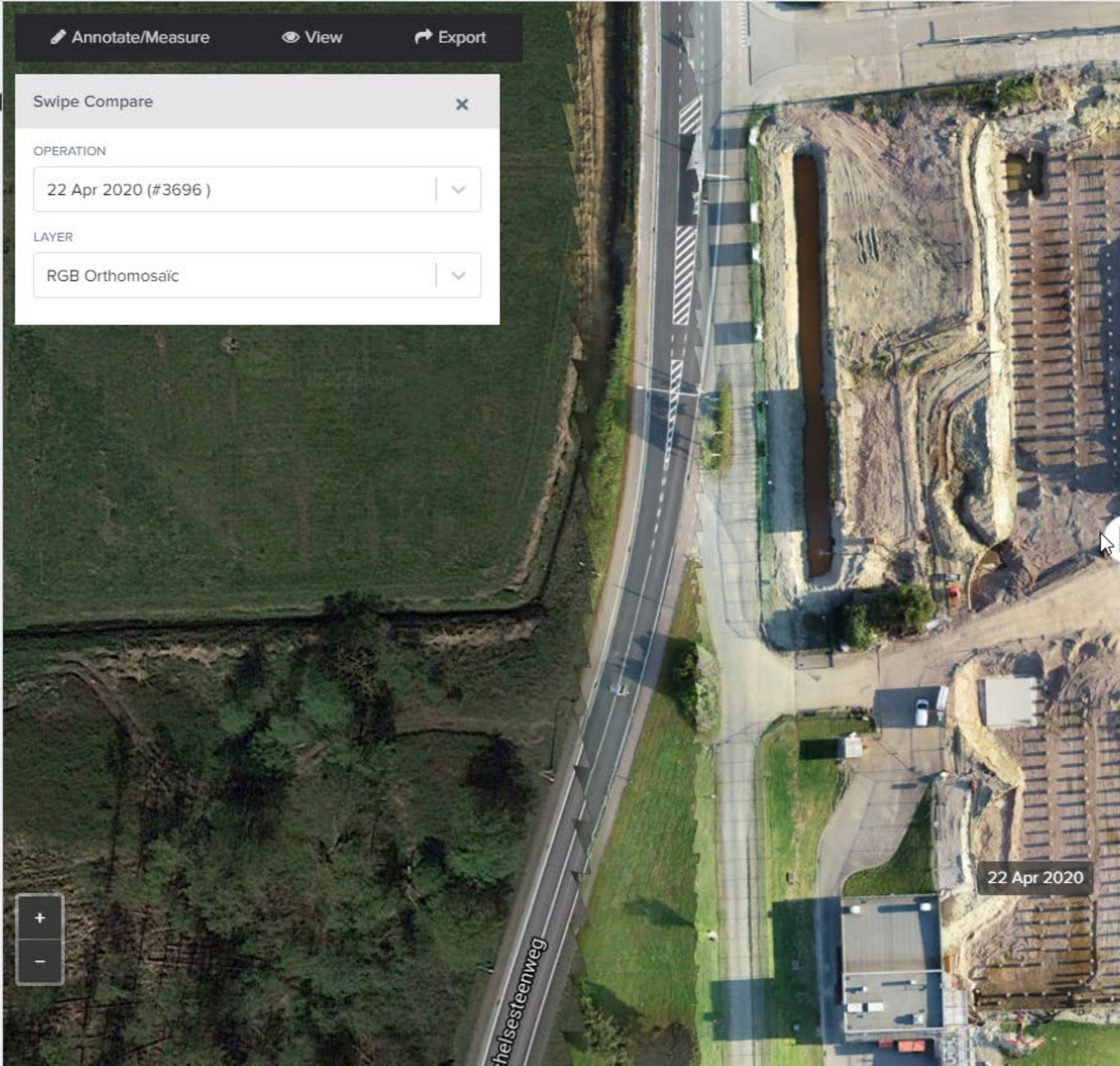
22 Apr 2020 (#3696)

LAYER

RGB Orthomosaic



- Layers
- Annotations [0]
 - Boundaries
 - Site Regions
 - Site Overlays
 - Photos
 - Digital Surface Model
 - RGB Orthomosaic
 - Base Layer



22 Apr 2020



23 Sep 2021





All Sites > UZA ANTWERPEN >

#1516 - Survey Essential (28 Feb 2019) COMPLETED

GCPs

Manage site

Filters

Switch View Mode

Files



Annotate/Measure

View

Export



Layers

- > Annotations [3]
- > Boundaries
- > Site Regions
- > Site Overlays
- > Photos
- > Digital Surface Model
- > RGB Orthomosaic
- > Base Layer







All Sites > Sint Baafs Vijve >

#2894 - Survey Essential (26 Nov 2019) COMPLETED

GCPs

Manage site

Filters

Switch View Mode

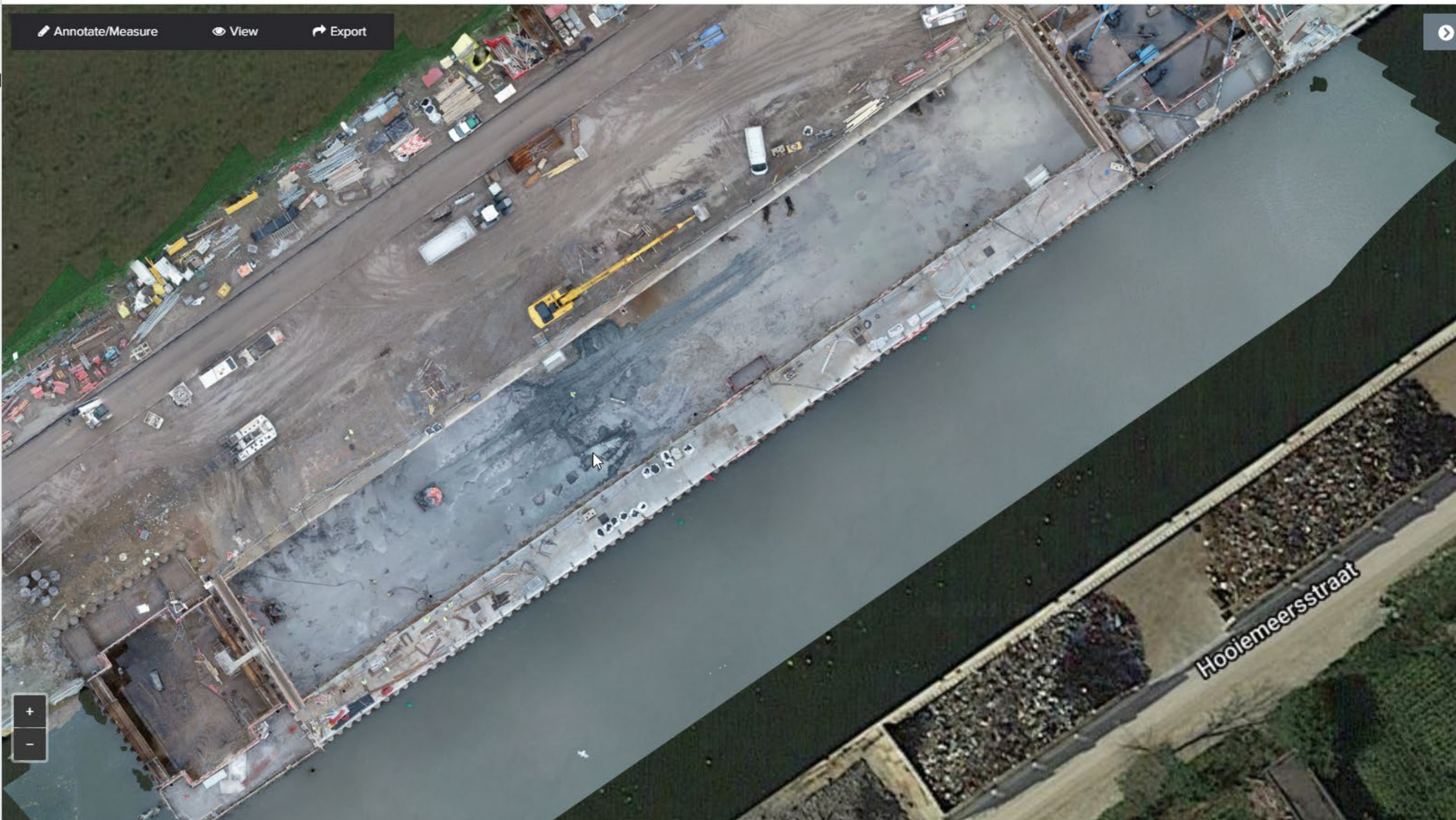
Files



Annotate/Measure

View

Export



Layers

- > Annotations [0]
- > Boundaries
- > Site Regions
- > Site Overlays
- > Photos
- > Digital Surface Model
- > RGB Orthomosaic
- > Base Layer





All Sites > Sint Baafs Vijve >

#2894 - Survey Essential (26 Nov 2019) COMPLETED

GCPs

Manage site

Switch View Mode

Files



Annotate/Measure

Export



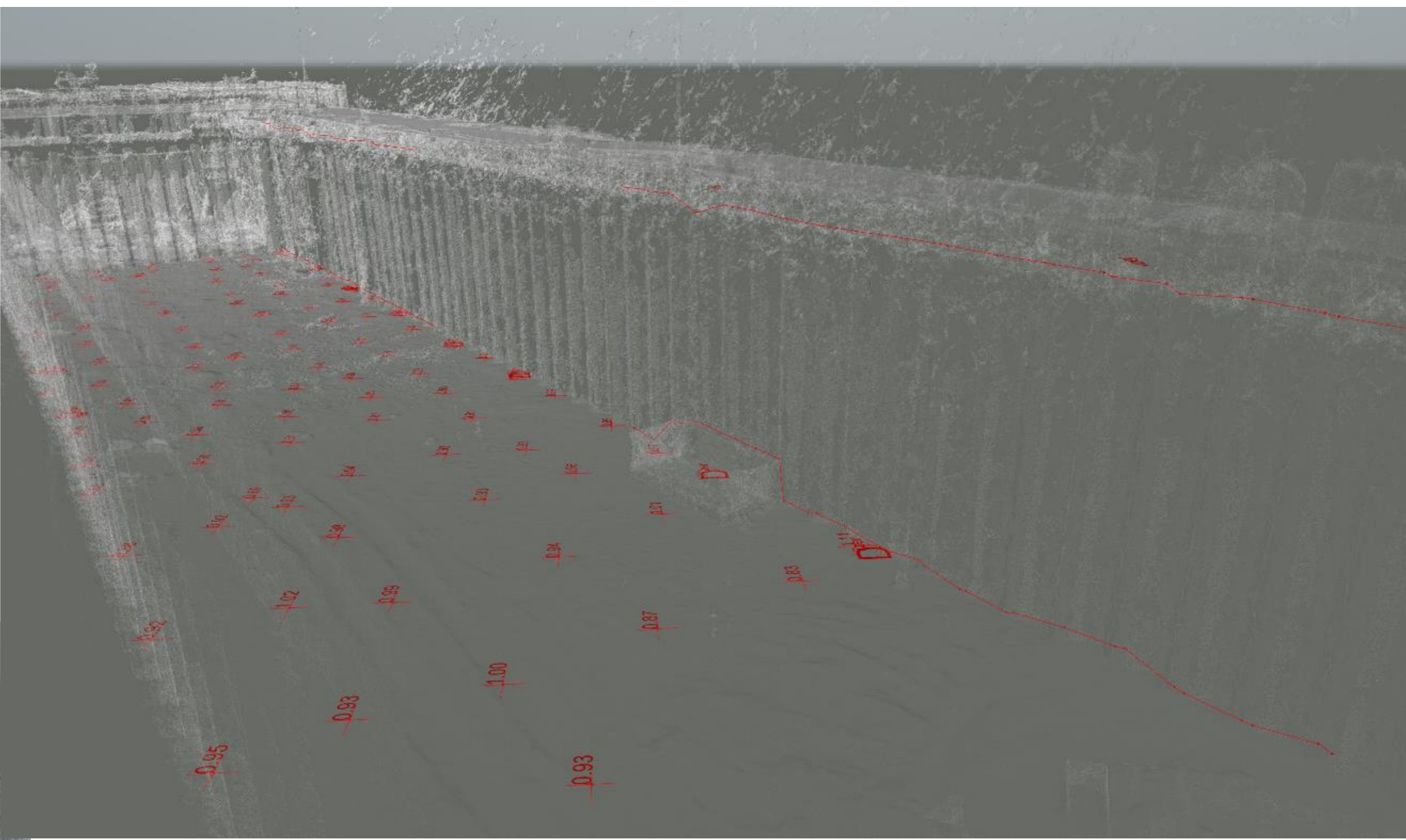
Layers

> Annotations

> 3D Model

> Point Cloud







All Sites > BR54 SCHOTEN RO >

#5916 - Survey Essential (13 Jun 2021) **COMPLETED**

GCPs

Manage site

Filters

Annotate/Measure

View

Export





All Sites > BR54 SCHOTEN RO >

#5916 - Survey Essential (13 Jun 2021) COMPLETED

GCPs

Manage site

Switch View Mode

Files



Annotate/Measure

Export



Layers

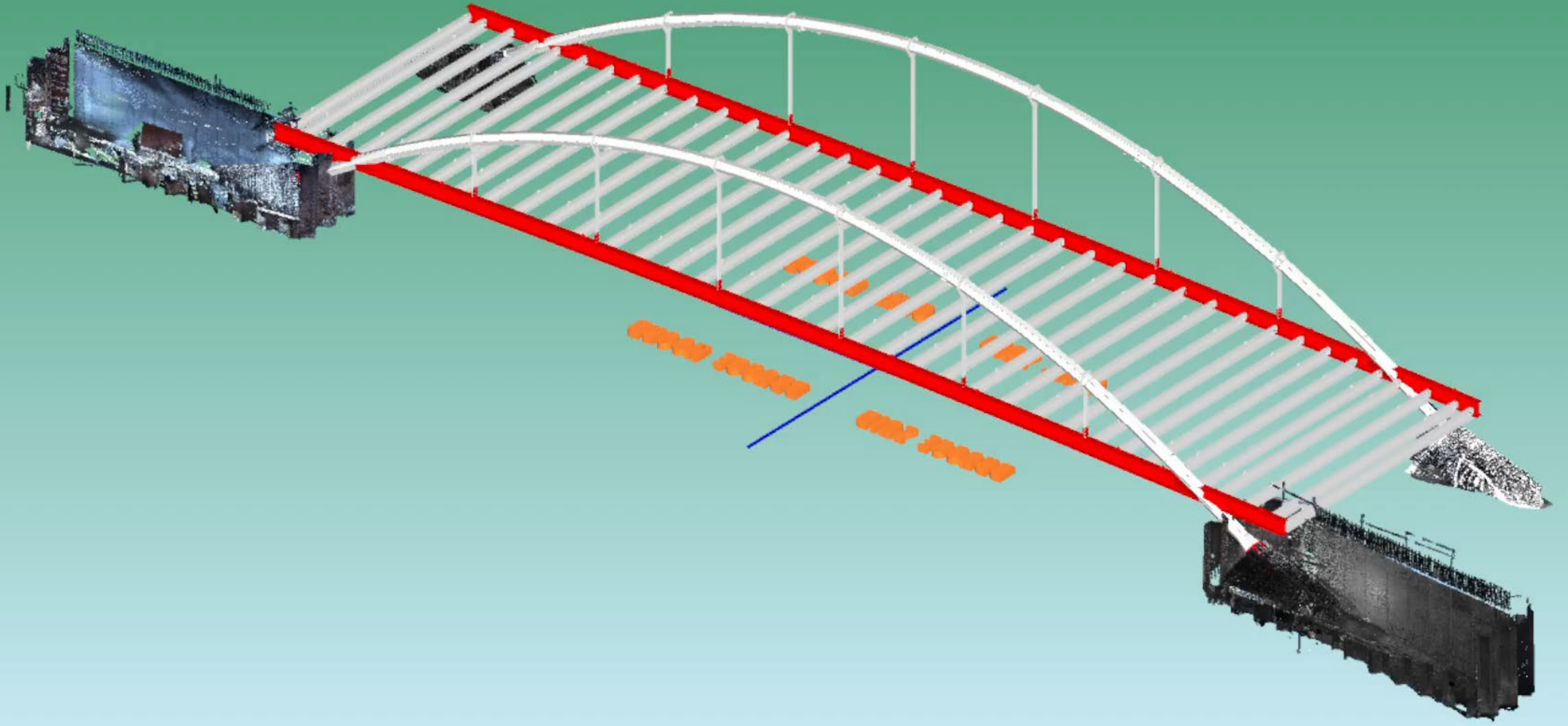
> Annotations

> 3D Model

> Point Cloud





















CONCLUSIE



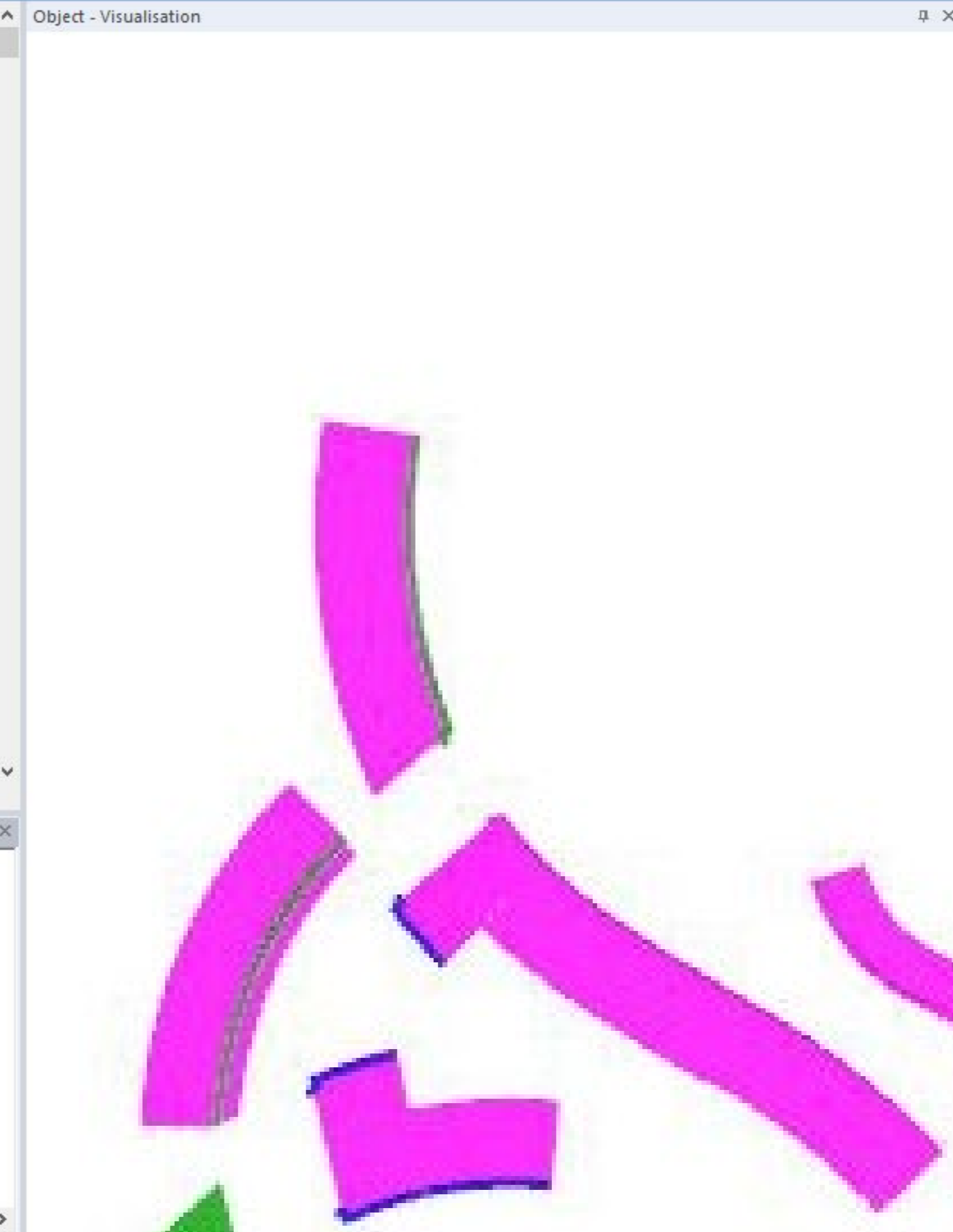
IQ/BQ Quantities Document-Properties | Project Window | Project Catalogs | Master Project | General
 Generate to selected objects | Generate BQ Quantity | Generate IQ Quantity | Degree of Completion [%] 100,00 | Quantity generation on the basis of AQ Quantity | BP/RP | RP 9 - juli 2019
 Update CPI Data | Objects | Filter | Edit | Structure

Classical | Model-Based | Job Estimate: Job Estimate | Filter (Outline Specification) | 100% | Object - Visualisation

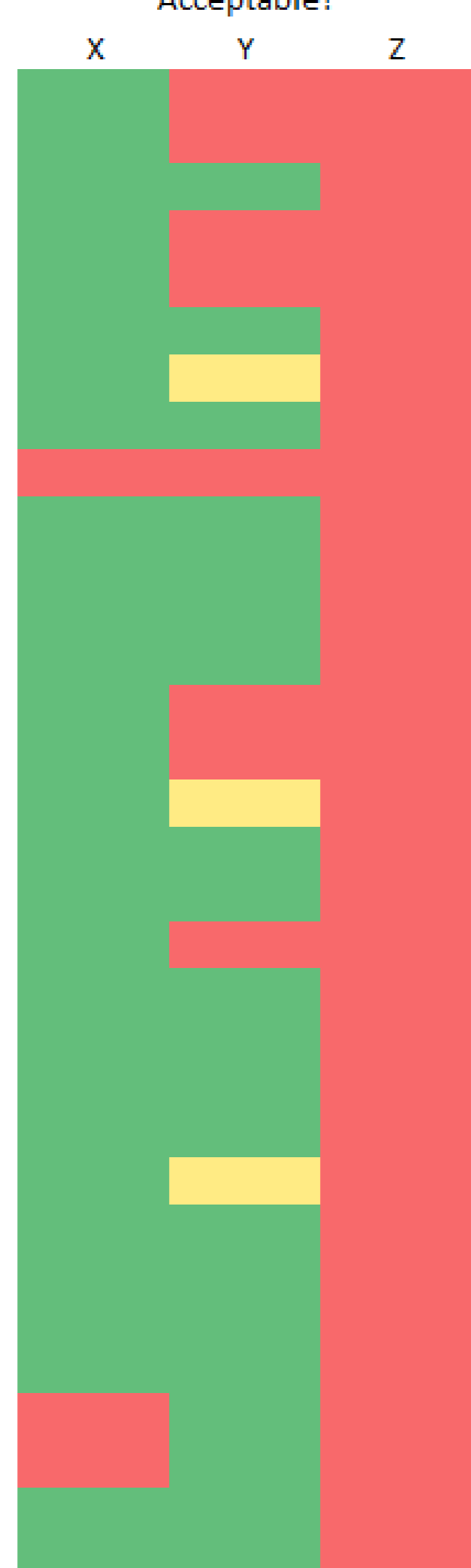
Structure	RN	Outline Specification	AQ Quantity	UoM	IQ per RP-1	IQ in RP	IQ per RP	BQ per BP-1	BQ per BP
Job Estimate									
BoQ: 1		Arcadis Template							
1.		SC-TU-DP - Roof plates							
1.10.		Volume	0,000	m3	0,000	0,000	0,000	0,000	0,000
1.20.		Wapening (180kg/m3)	0,000	kg	0,000	0,000	0,000	0,000	0,000
1.30.		Bekisting Verticaal	0,000	m2	0,000	0,000	0,000	0,000	0,000
2.		SC-TU-DW - Diaphragm walls							
2.10.		Volume	561,268	m3	106,134	79,430	185,564	0,000	0,000
2.20.		Oppervlakte	2.524,185	m2	452,280	375,212	827,492	0,000	0,000
2.30.		Wapening (180kg/m3)	101.027,964	kg	19.104,165	14.297,324	33.401,489	0,000	0,000
3.		SC-TU-FP - Foundation slabs							
3.10.		Volume	516,092	m3	19,090	0,000	19,090	0,000	0,000
3.20.		Bekisting Verticaal	304,041	m2	12,749	0,000	12,749	0,000	0,000
3.30.		Wapening (180kg/m3)	92.896,319	kg	3.436,123	0,000	3.436,123	0,000	0,000
4.		SC-TU-JB - Joint inner walls							
5.		SC-TU-LB - Longitudinal beams							
6.		SC-TU-WV - Lean concrete slab							
6.10.		Volume	108,987	m3	3,952	0,000	3,952	0,000	0,000
7.		SC-TU-VP - Transition slabs							
BoQ: 2		BETON, WAPENING EN BETONCONSTRUCTIES							

Object - Legend | Quantity Splitting

Colour/Description	RN	Stem	Objects	AQ Quantity	RP	IQ Quantity
Volledig gevorderd in huidig vorderingst Actual State for current RP						
Al volledig gevorderd in vorig vorderings Actual State for previous RP						
NOG te vorderen en TE LAAT volgens pl Planned State for Current RP						

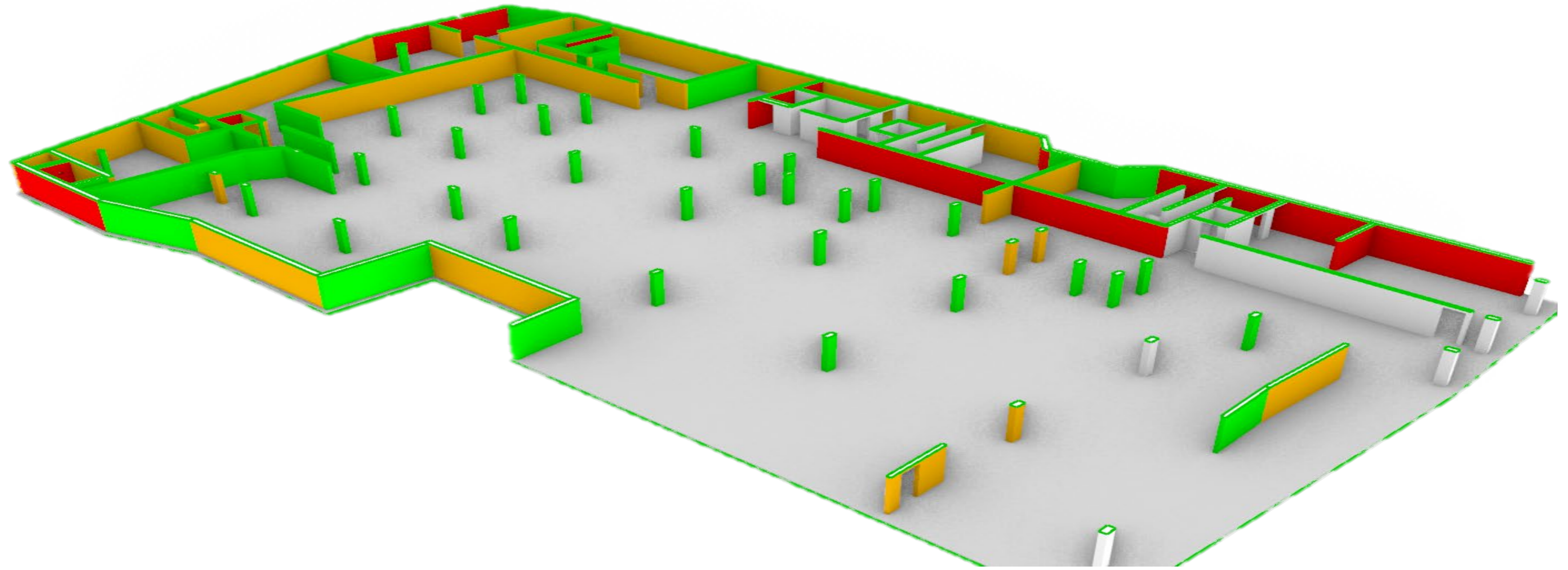


Element #	ΔX (mm)	ΔY (mm)	ΔZ (mm)
1	0	78	48
2	15	63	48
3	1	0	48
4	3	104	48
5	7	35	48
6	0	4	48
7	0	21	48
8	5	17	48
9	69	32	48
10	0	2	48
11	8	19	48
12	1	2	48
13	12	2	48
14	4	37	48
15	1	71	48
16	9	25	48
17	1	12	48
18	2	3	48
19	0	46	48
20	4	4	48
21	0	0	48
22	3	0	48
23	0	4	48
24	3	29	48
25	13	3	48
26	0	10	48
27	1	3	48
28	16	3	48
29	42	10	48
30	31	14	48
31	5	12	48
32	0	16	48



Acceptability ranges:

0-20mm	acceptable
20-30mm	danger zone
30+ mm	inacceptable





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