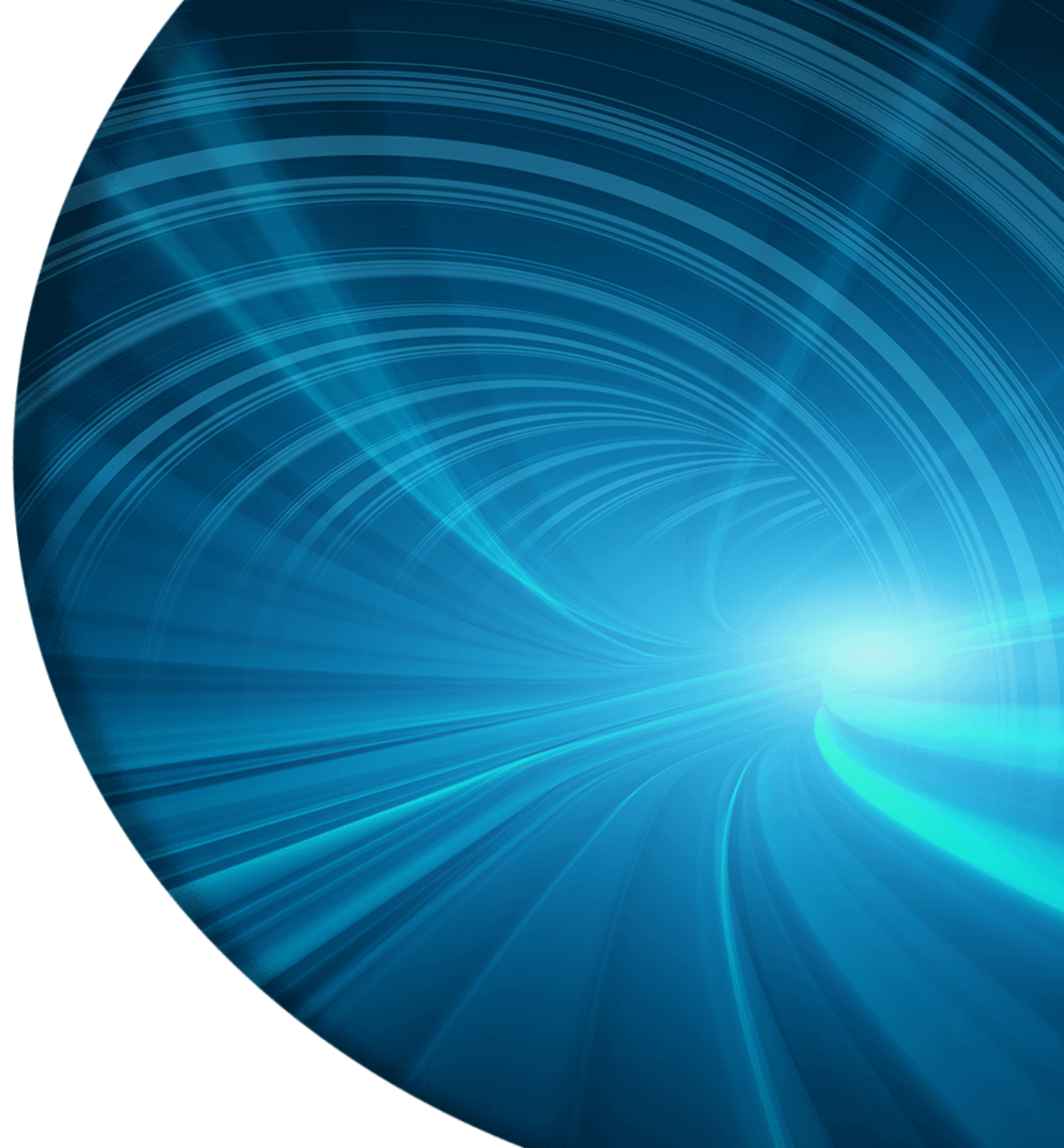




Surveying @ CRL



Introducing the Link Alliance

- Link Alliance members:
 - Construction: Vinci Construction Grands Projects, Soletanche Bachy International NZ and Downer NZ
 - Design: AECOM, Tonkin+Taylor, WSP
 - CRL Limited
- *International team with local experience* – spanning rail projects in Hong Kong, Singapore, Qatar, Egypt and Auckland's own Waterview Tunnel
- *Knowledge transfer* – staff with experience on other contracts, teaming up with embedded CRL staff



The Link Alliance - delivering Auckland's first underground



Currently Already Let/Under Construction:

- Contract 1 - Britomart Station/Lower Queen St
- Downtown Shopping Centre (DSC)
- Contract 2 - Albert St (Customs to Wyndham St)
- Contract 6 - Mt Eden Stormwater Main

Contract 3 - Alliance:

- Stations and Tunnels
- Western Line connection
- Rail Systems

Contract 9 - Britomart East

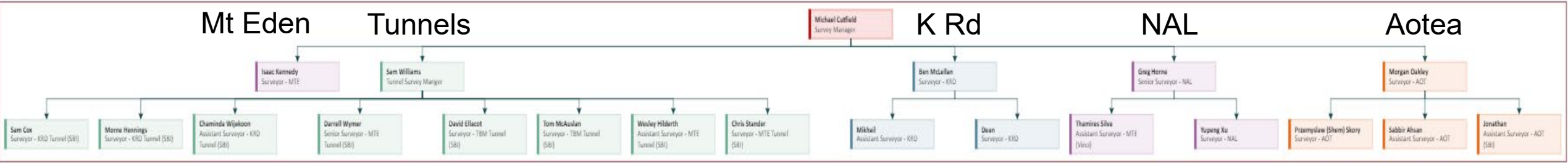
Wider network improvements (not shown):

- Strand & Otāhuhu improvements
- Newmarket improvements
- Henderson improvements

Overview programme (all dates approximate)

Key Milestones	2019	2020	2021	2022	2023	2024
Enabling works, including utilities, demolition	Q3	•	Q3			
Mt Eden Station	Q4	•	•	•	•	Q4
Karangahape Station		Q1	•	•	•	Q4
Aotea Station		Q1	•	•	•	Q4
Testing and commissioning					Q2	Q4

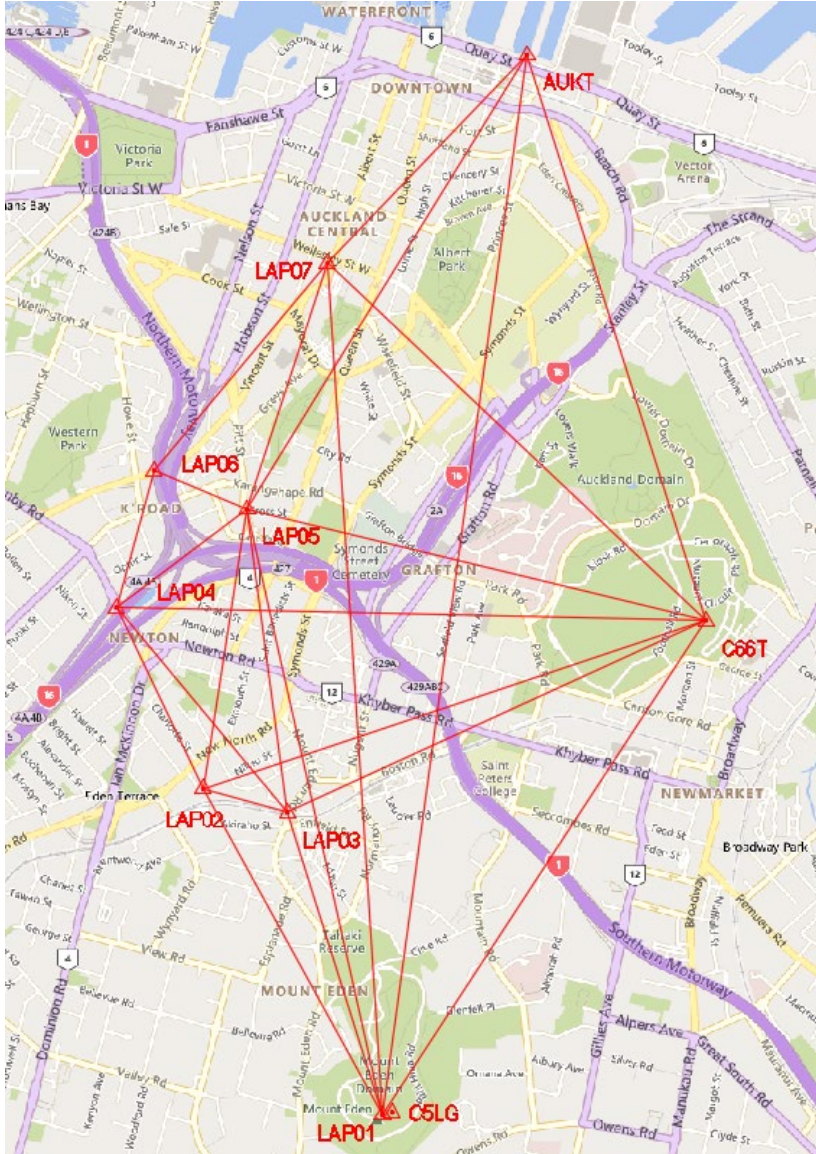
Surveyors



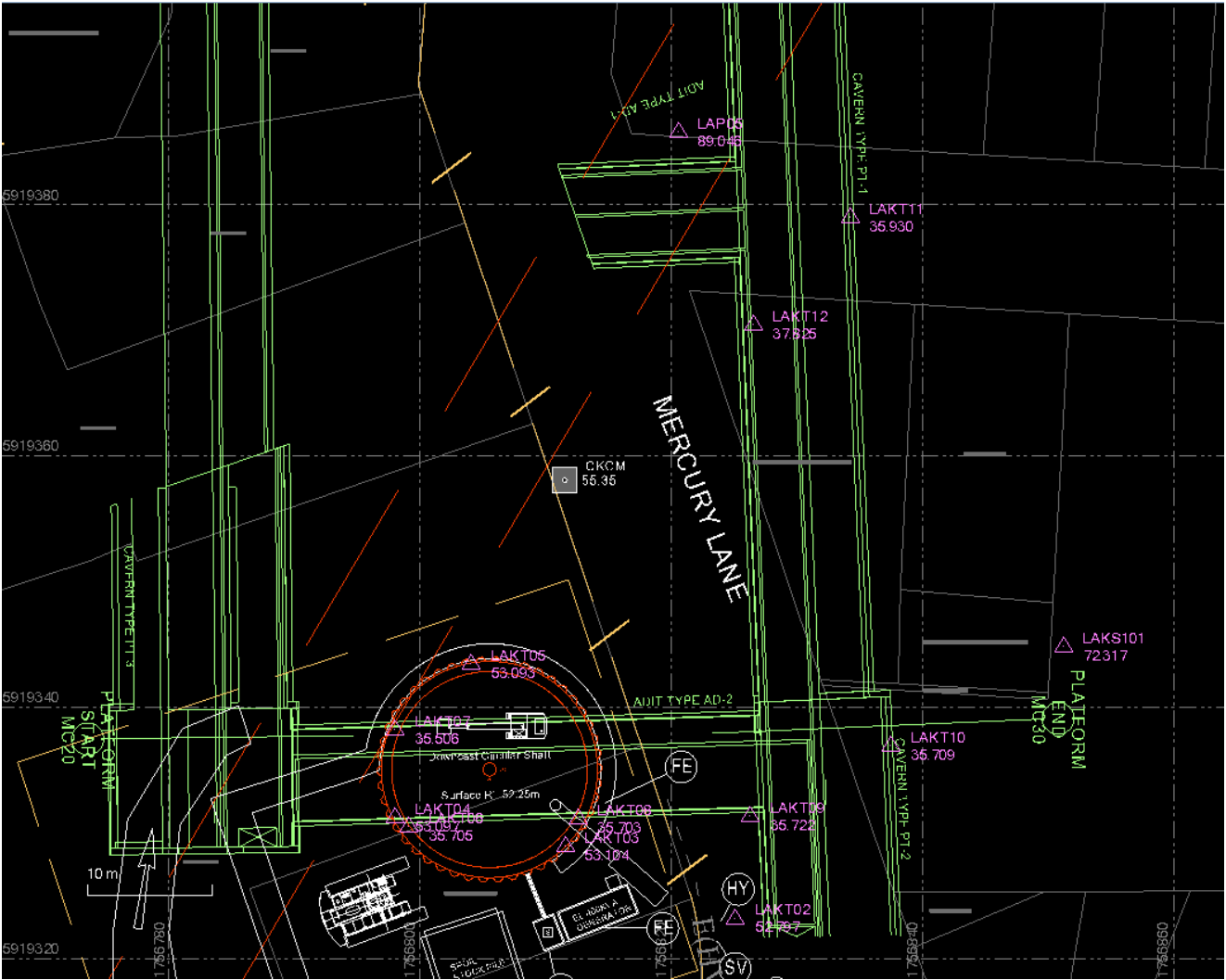
Gear



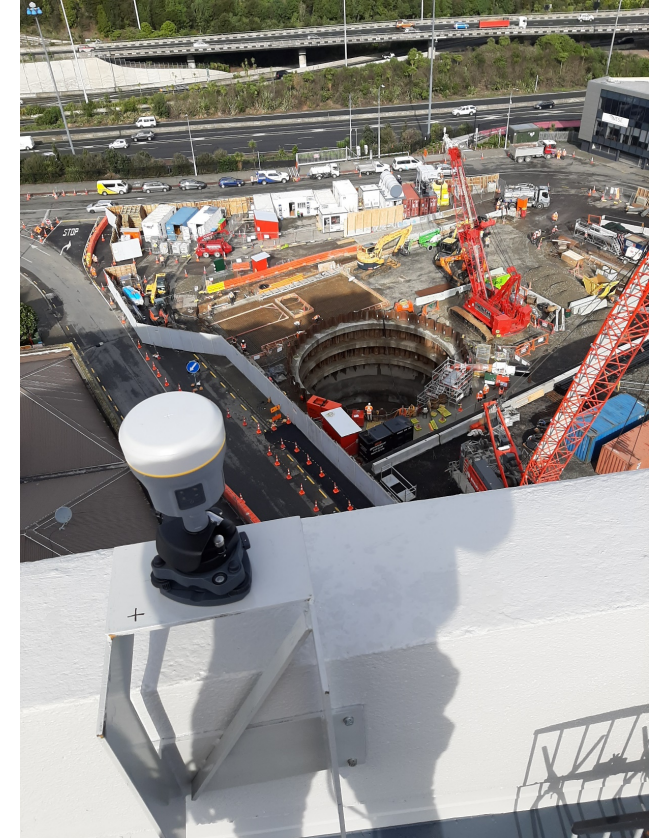
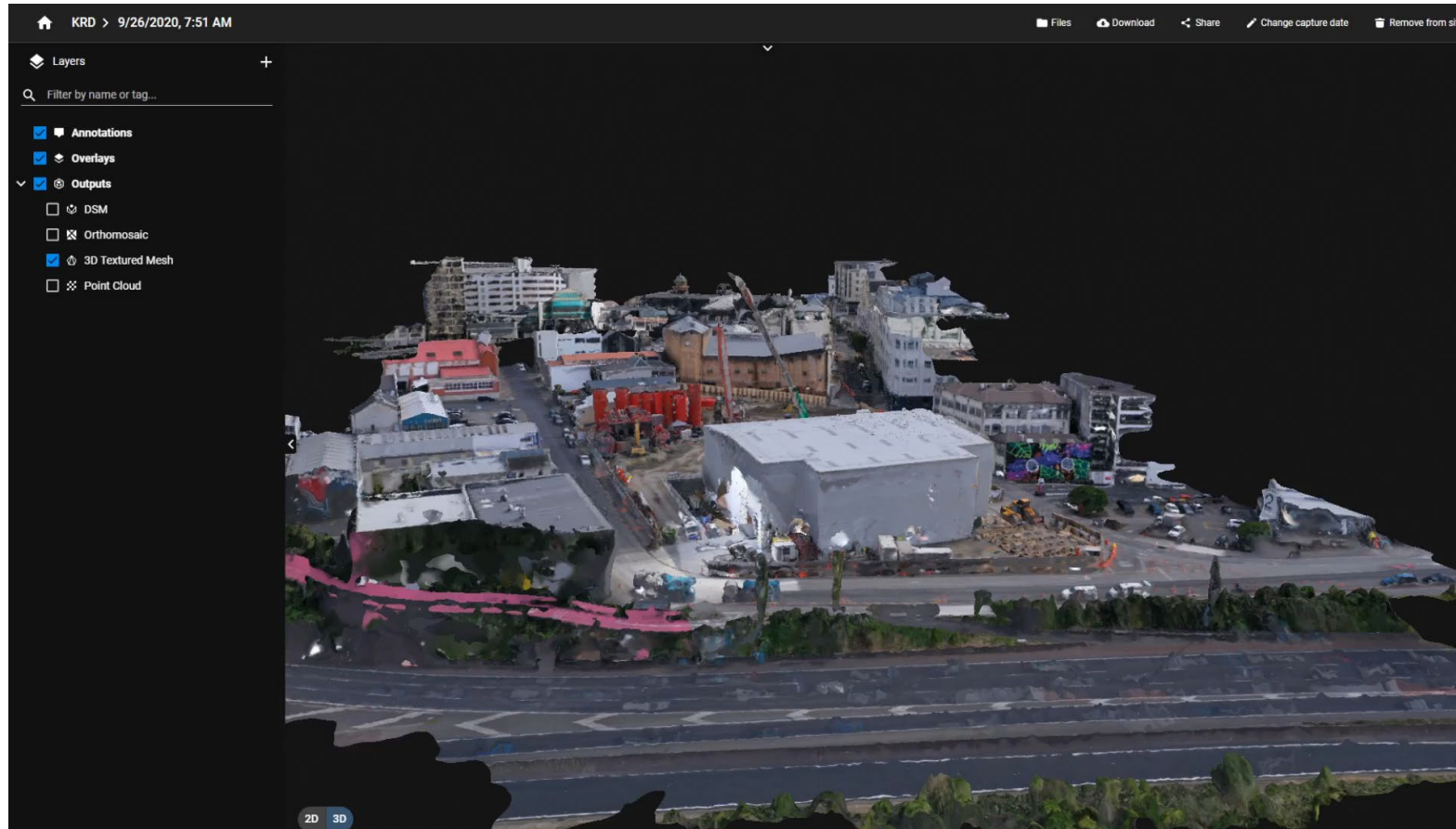
The Primary Control Network



Control Down a Shaft



Control Down a Shaft



Drone Data

Home

MTE > 3/15/2021, 9:09 AM

Files

Download

Share

Change capture date

Remove from site

M

Feb 16

Mar 15

January 2021February 2021March 2021April 2021May 2021

Layers

Filter by name or tag...

Annotations

Overlays

Outputs

40.MTE.020.pdf

BASQUE PARK.pdf

SIPHON PLAN.pdf

CRL-MTE-TMP-NBA-DRG-120005[00...

Site installation December-A0 Isaac....

CRL-MTE-UTH-LKA-DRG-254121[000]...

3D Textured Mesh

DSM

Point Cloud

Orthomosaic

2D

3D

Settings

Camera

Measure

Share

Search

76.235 m

78.511 m

24.271 m

901.737 m²

28.86 m

40.915 m

24.032 m

107.294 m

125.144 m

Marker 32

Name

Marker 32

Description

No description

Tags

Color

Measurements

Coordinates (WGS84)

36.86800° S 174.76109° E

X (m)

399726.0458652069

Y (m)

801300.2371572691

Z (m)

75.29501342773438

NZGD2000 / Mount Eden 2000

Metric

X: 399,555.004 m Y: 801,377.399 m Z: 70.222 m

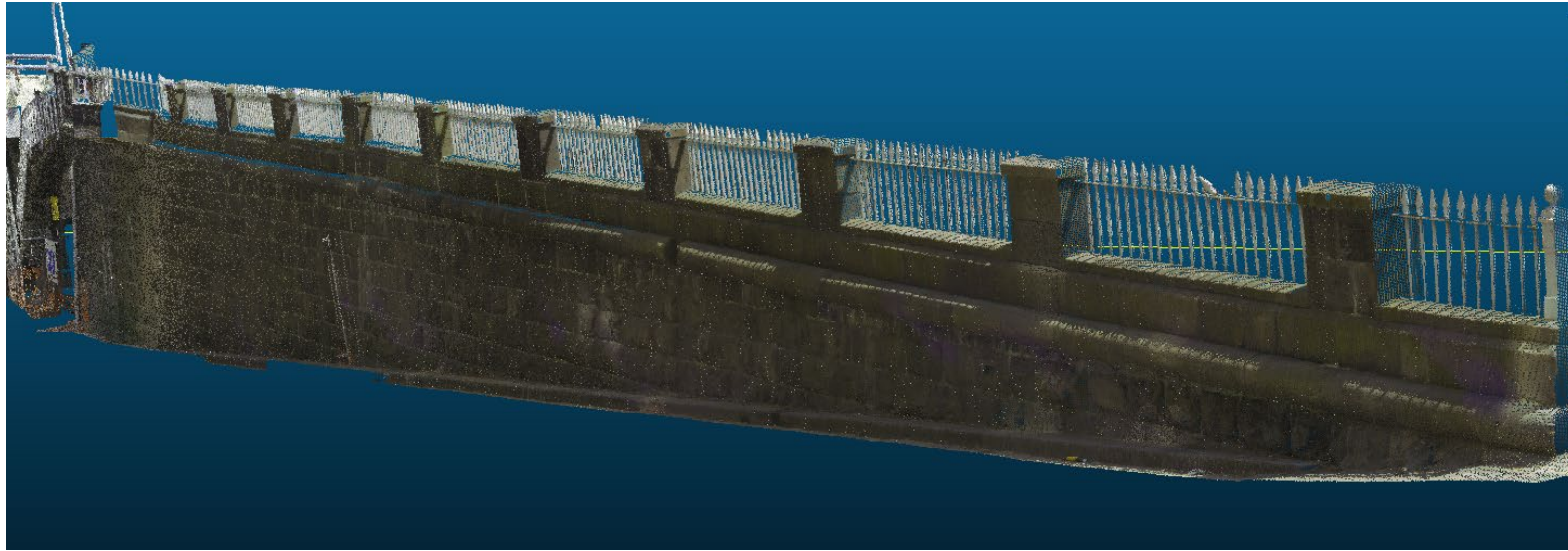
Link Alliance

10

Drone Data



3D Scanning



3D Scanning

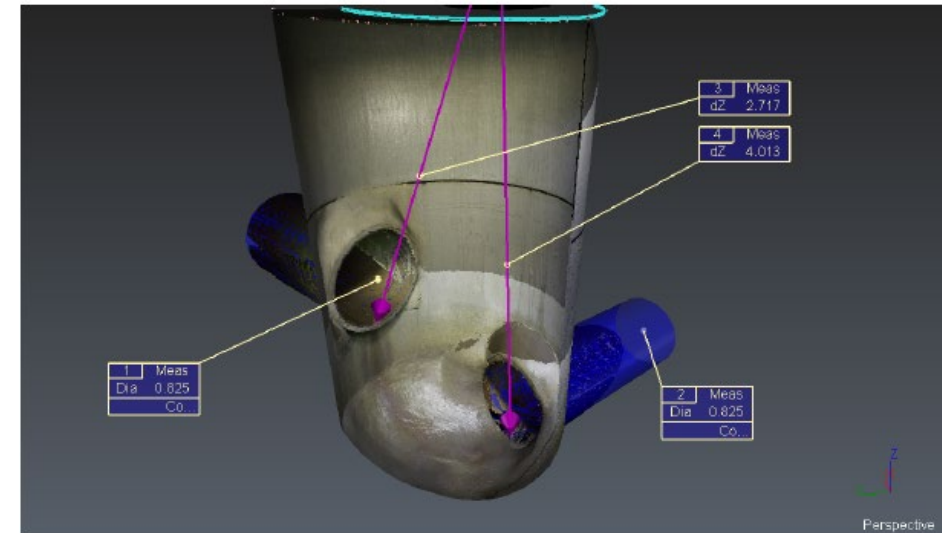


SWMH - 2000680923

Date Scanned 29/07/2020

name	Meas Dia (m)	Comments
Inlet Diameter	0.825	Concrete
Outlet Diameter	0.825	Concrete

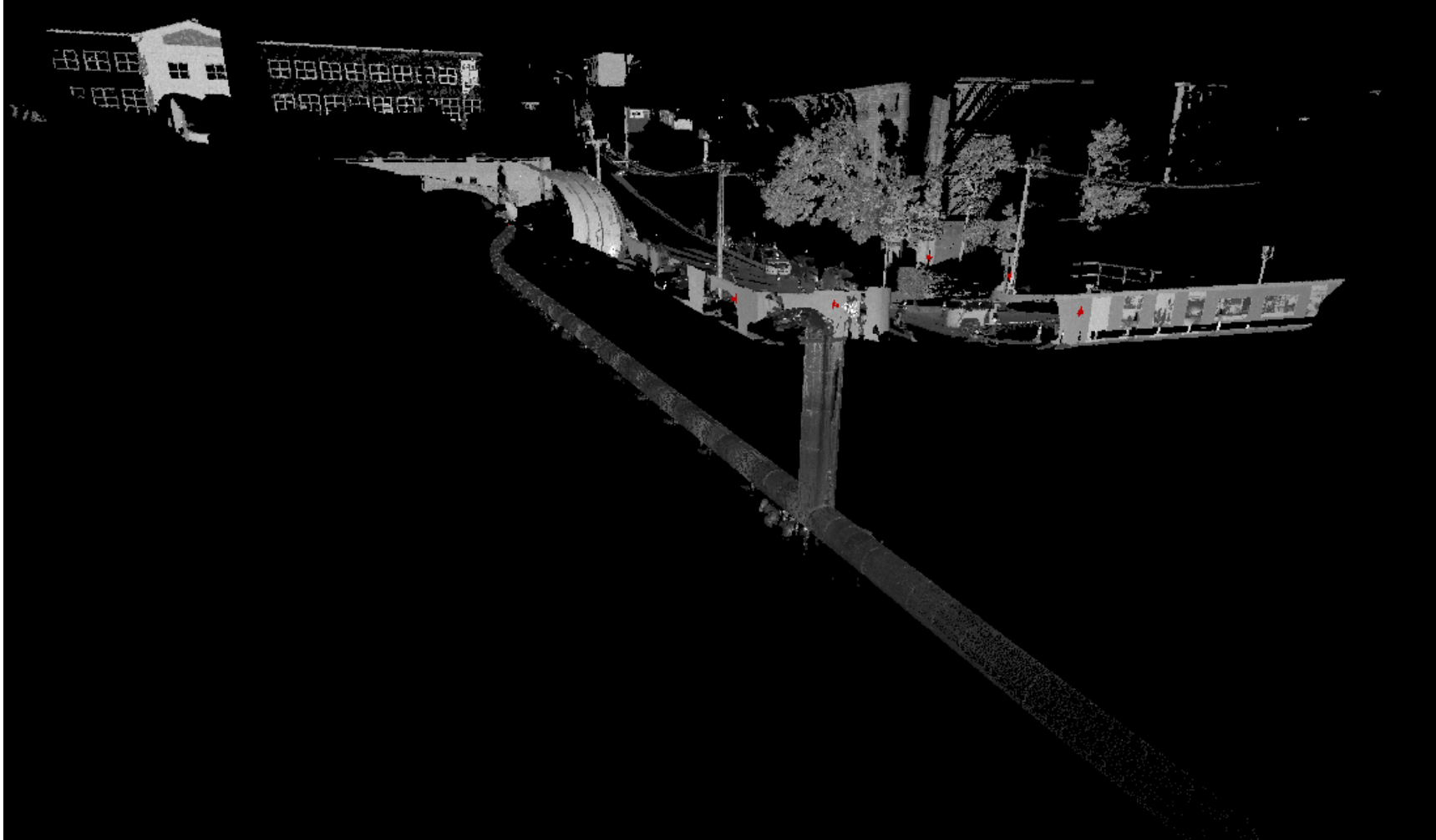
name	Meas d (m)
Depth To Invert - Inlet	2.717
Depth To Invert - Outlet	4.013



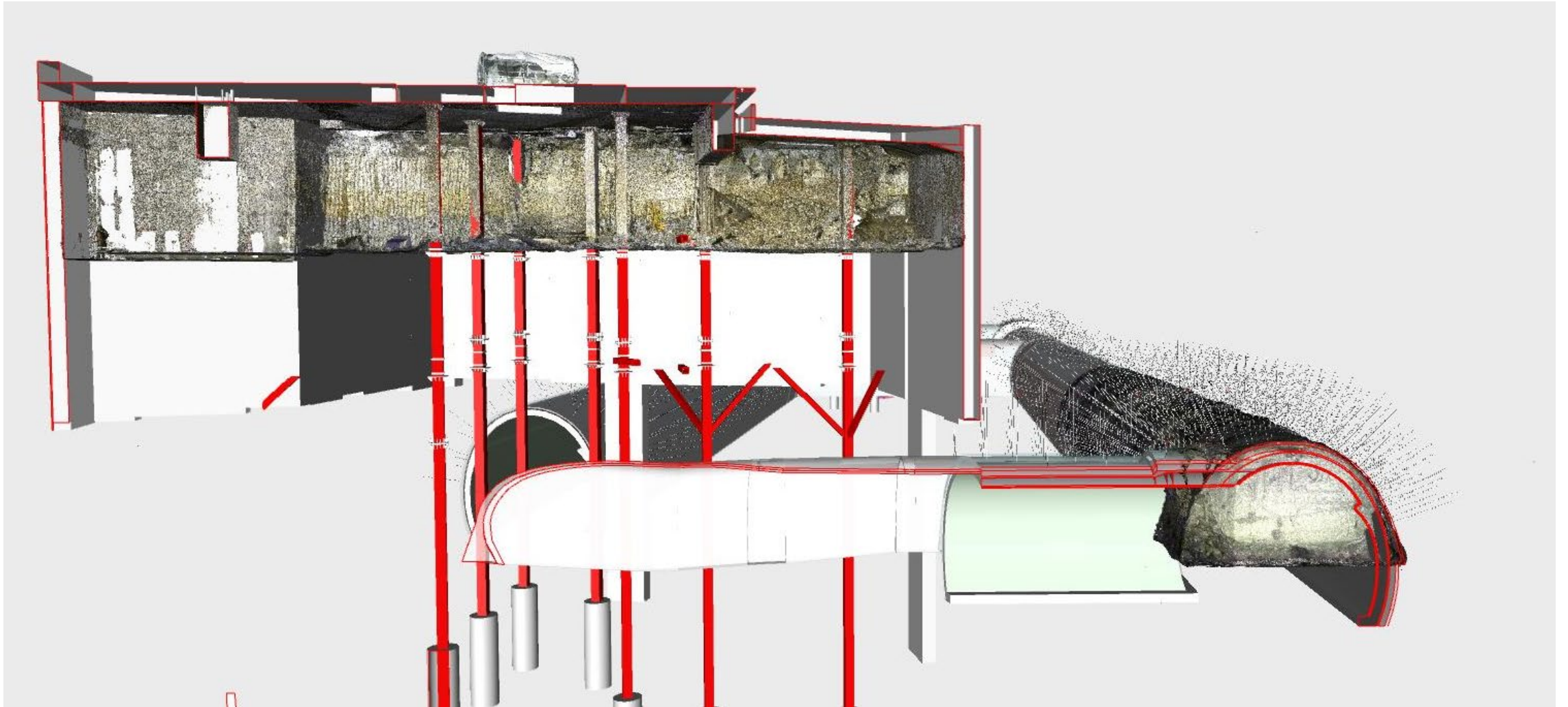
Lid Location: Easting 399959.135 Northing 801384.948 Elev 70.997



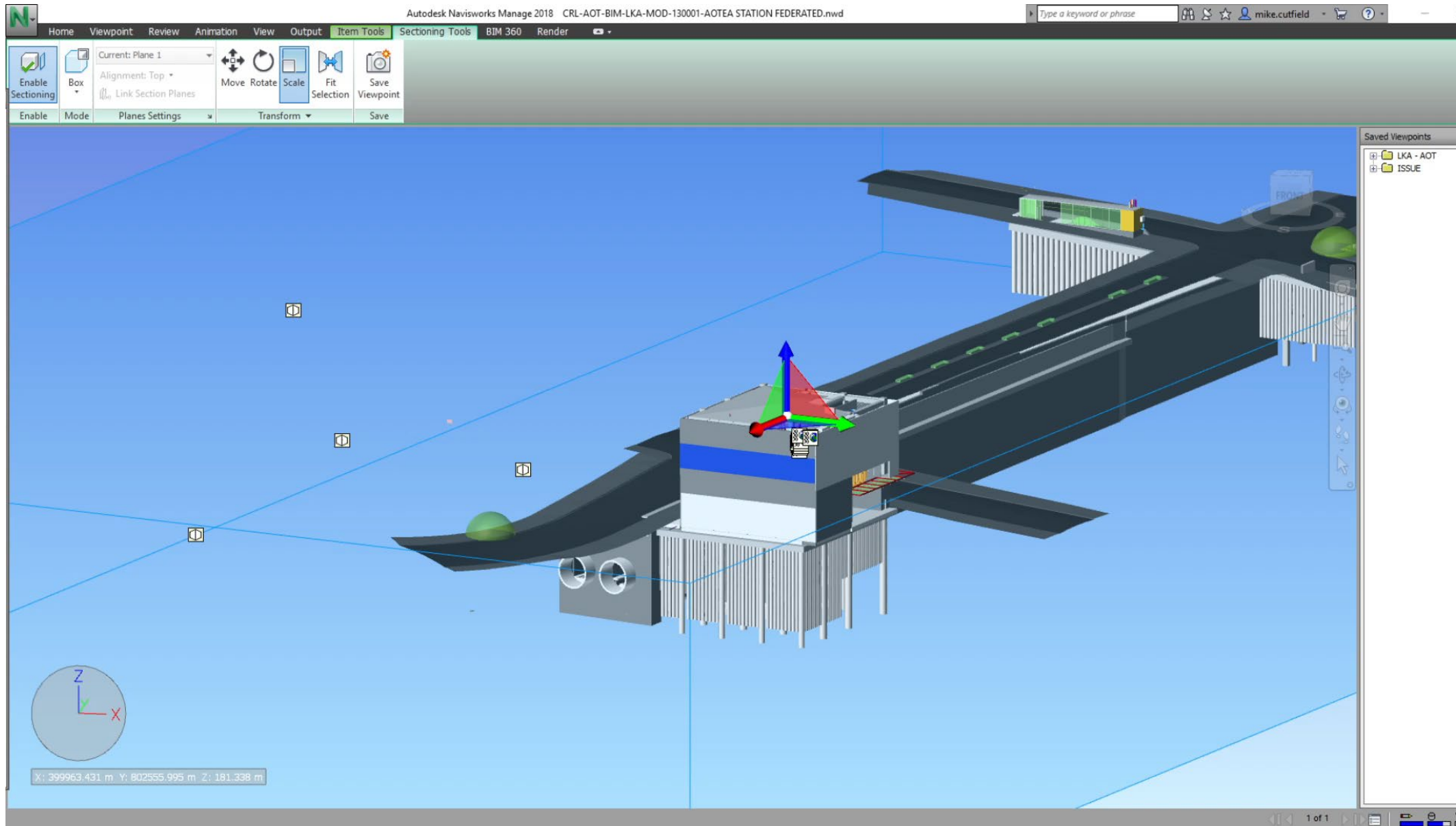
3D Scanning



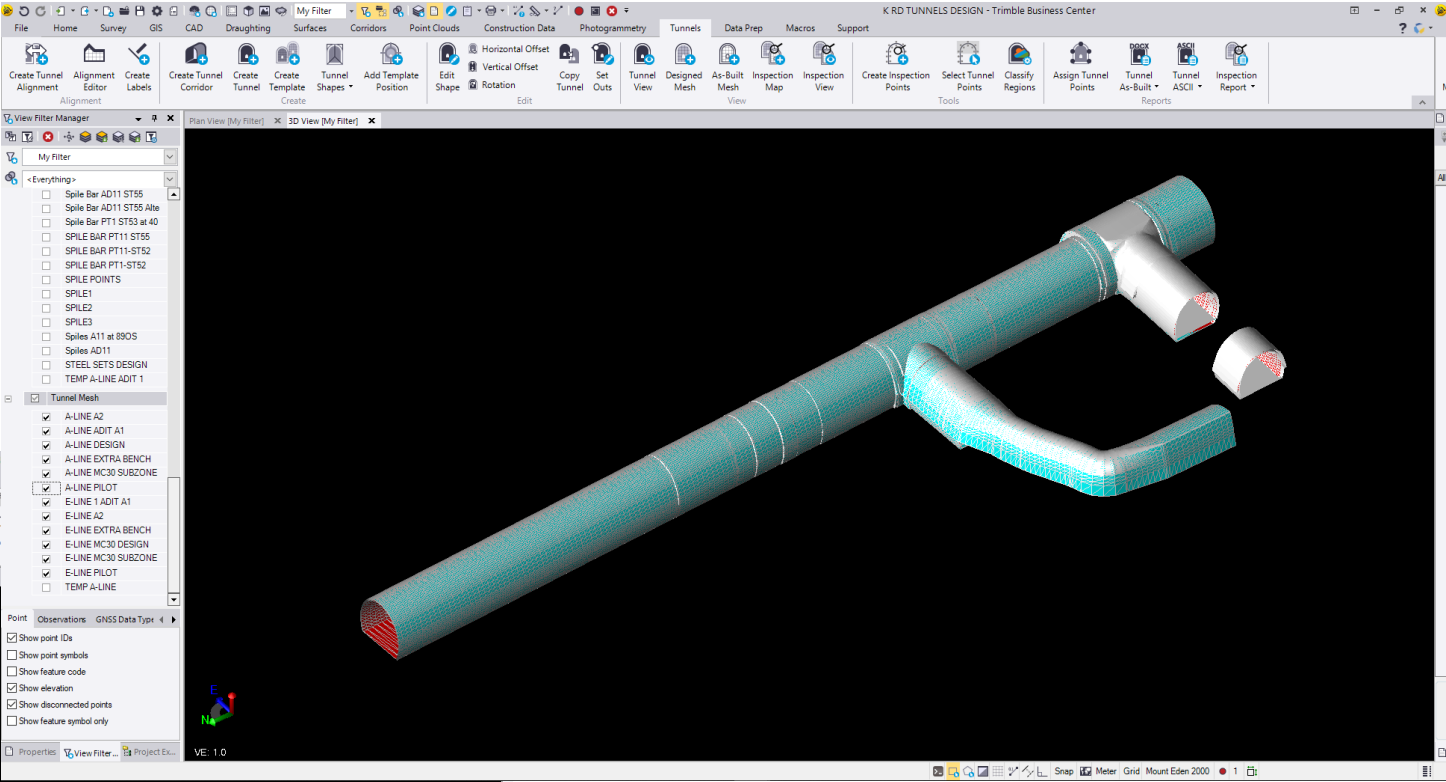
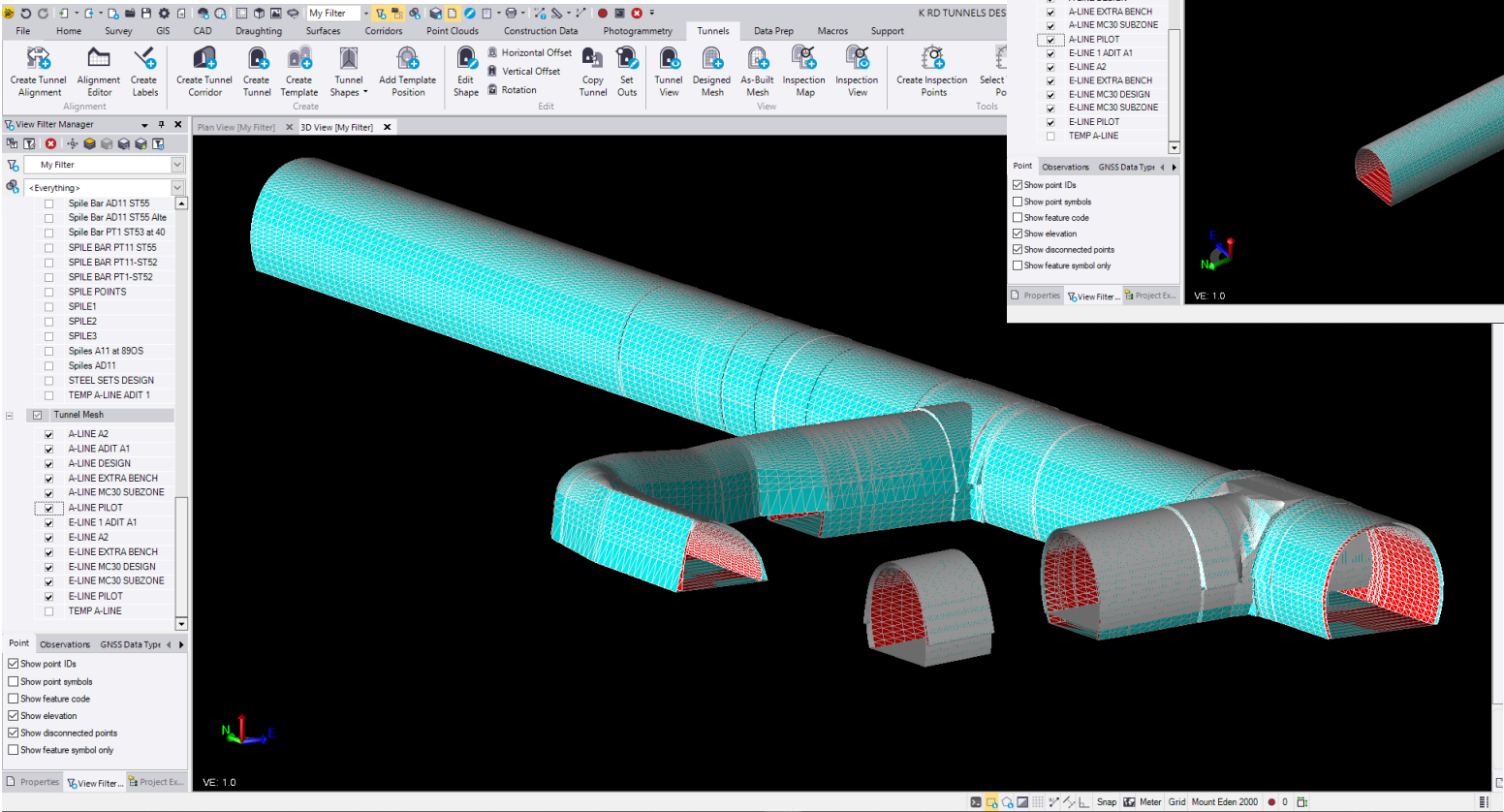
3D Scanning



The BIM Team



The BIM Team



The BIM Team





[CityRailLink.co.nz](https://www.cityraillink.co.nz)

