Lift Shaft Verticality Report

Lift Core 2 Shaft 1 18-09-17

This report shows the verticality of the above-mentioned shaft. Its intention is for inspection of the shafts verticality and showing the deviations from the as built vertically rather than deviations from the absolute design position.

Equipment - Trimble TX8 Laser Scanner Serial Number 94510092. Calibration certificate attached.

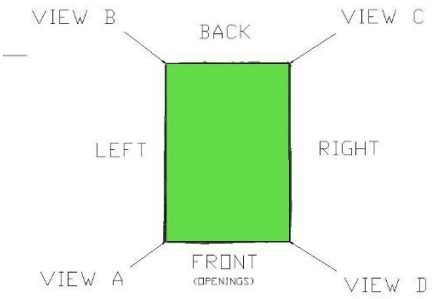
Scan Density- 3 Scans were done of this shaft at a scan density of 15mm at a range of 10m resulting in point cloud of approximately 11 million measurements for the analysis.

Scan Accuracy- scanner accuracy < 2mm

1. Vertical Deviation Report

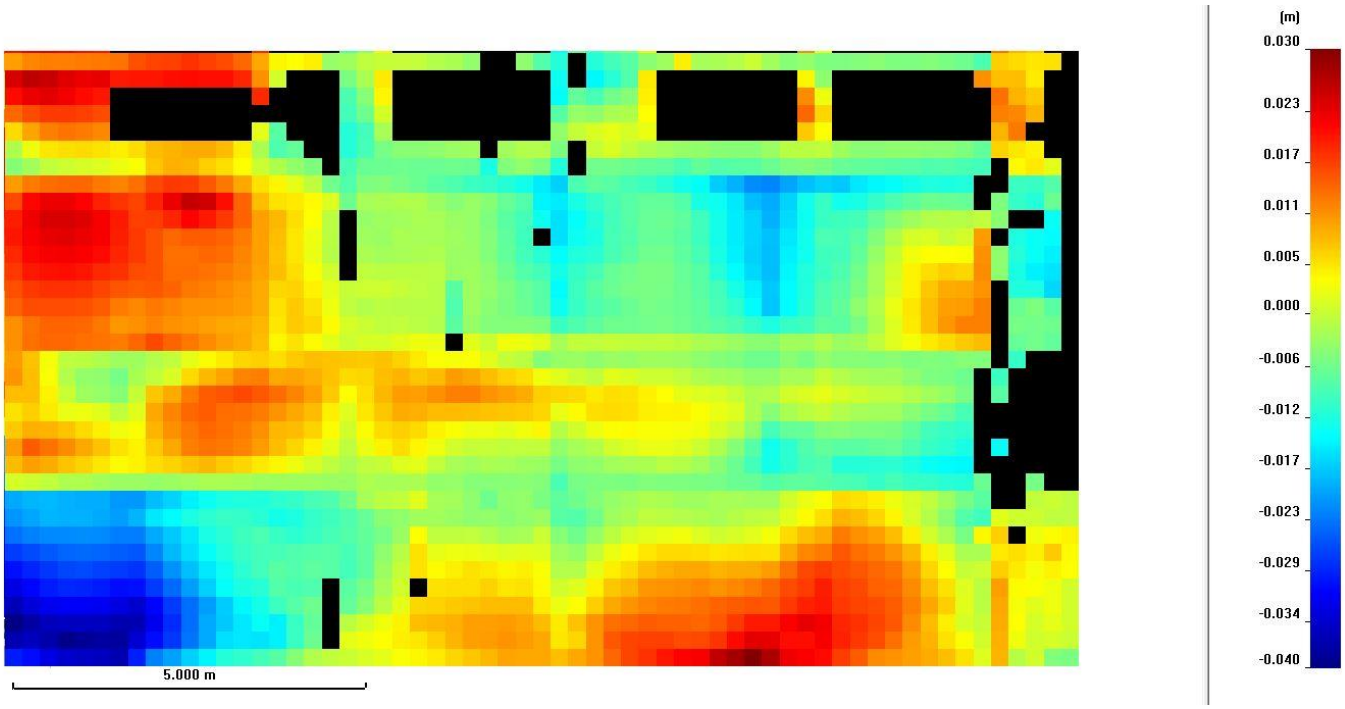
The below deviations displayed as a thematic map are based on the comparison between the as built shaft and the "best fit" vertical geometry that can fit inside the as built structure or the "average vertical structure", not the design position. The resultant best fit/average geometry size is 1.813m x 2.616m

SHAFT LAYOUT

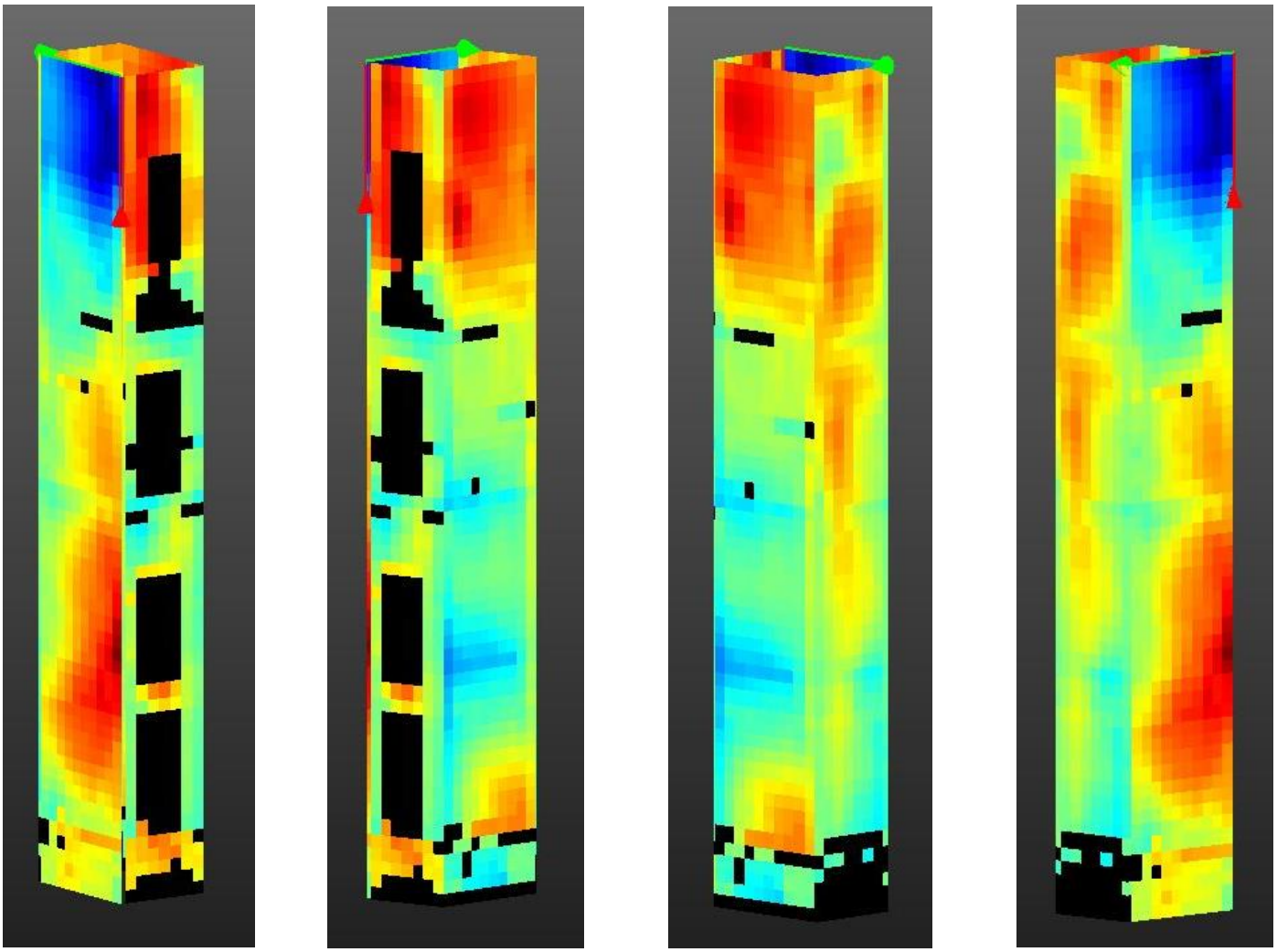


DEROLLED DEVIATIONS ON 0.25 X 0.25 GRID AS VIEWED FROM INSIDE THE SHAFT

TOP BOTTOM

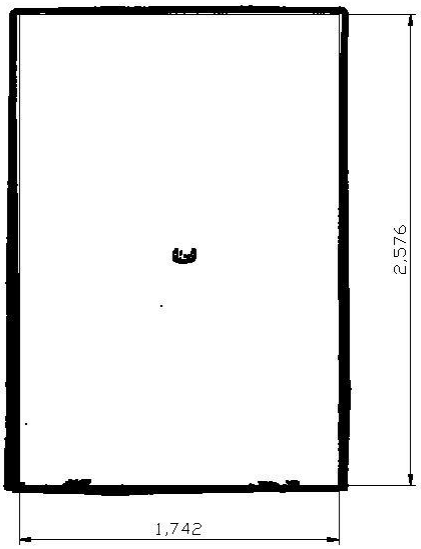


VIEW A **View D** **View C** **View B**



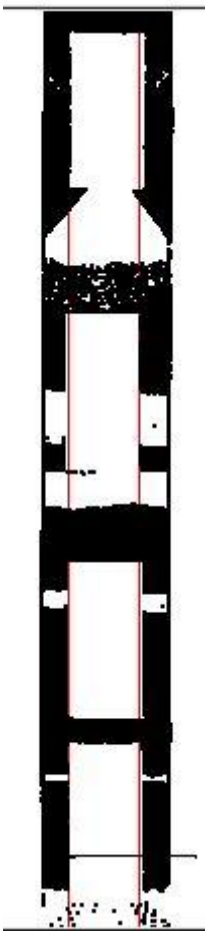
2. Clear Vertical Clearance Report

The below clearances are for the unobstructed clear vertical space that the as built shaft allows for a rectangular shaped object. The clear open dimensions are 1.742m x 2.576m



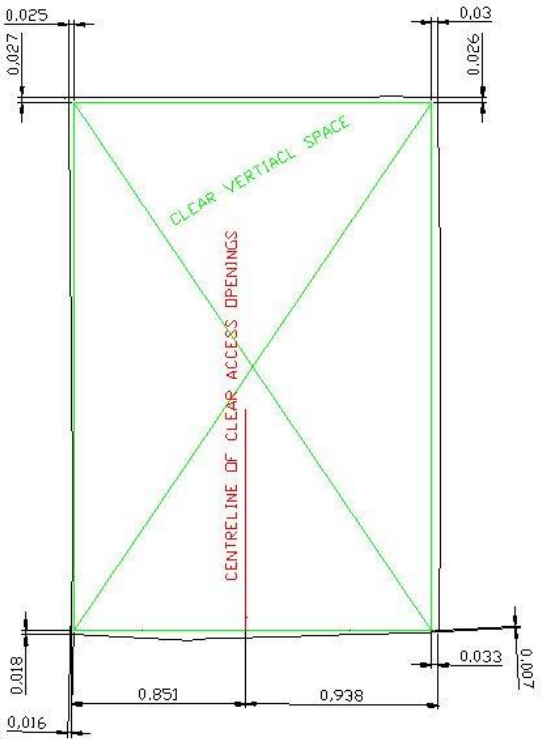
3. Shaft Opening Clearance and Verticality

The below shows the clearance of the access openings to the shaft in terms of unobstructed vertical clearance measured to the inside face of the lift shaft. The width of this clear vertical space is 1.015m

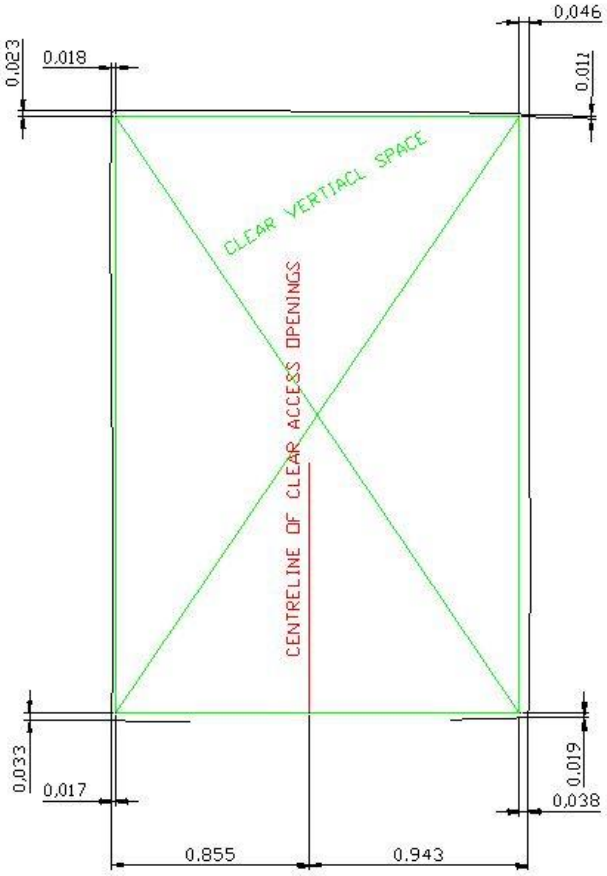


4. DEMENSIONS AT 2M INTERVALS FROM EXISTING TO CLEAR SPACE

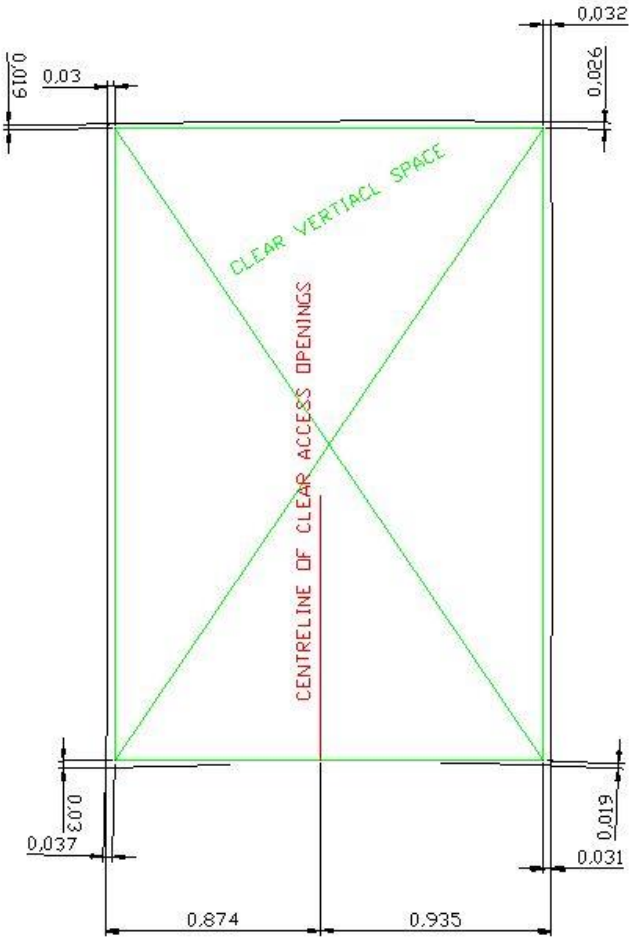
AT ROOF



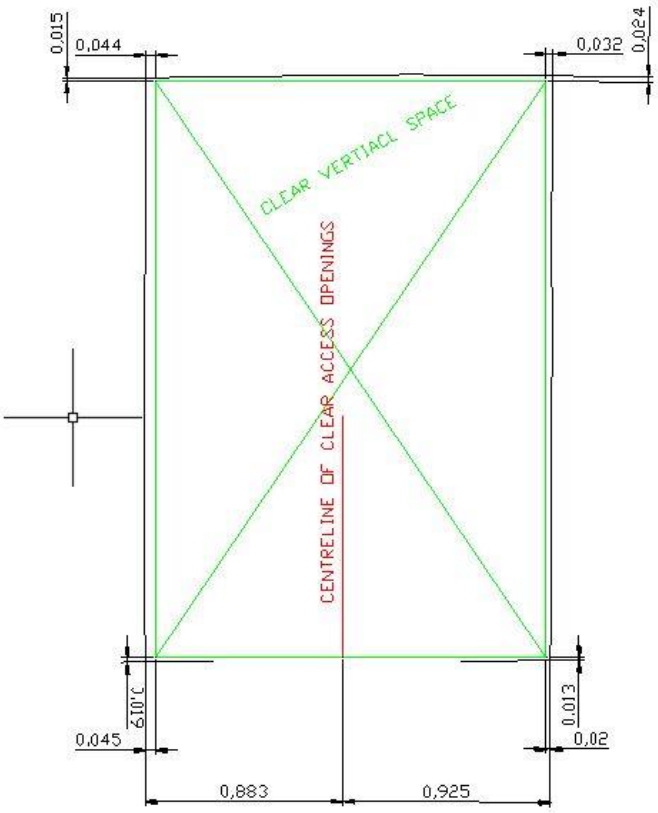
AT ROOF -2m



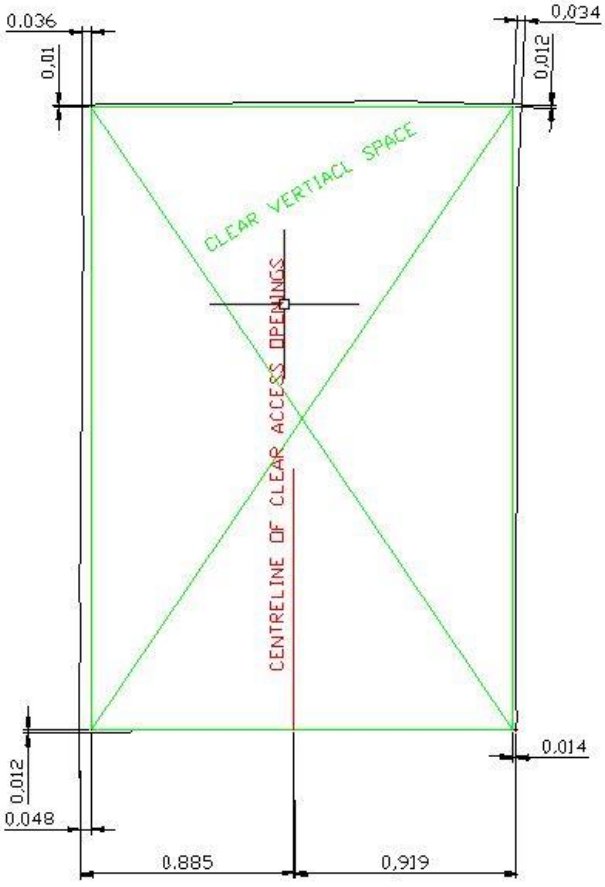
AT ROOF -4m



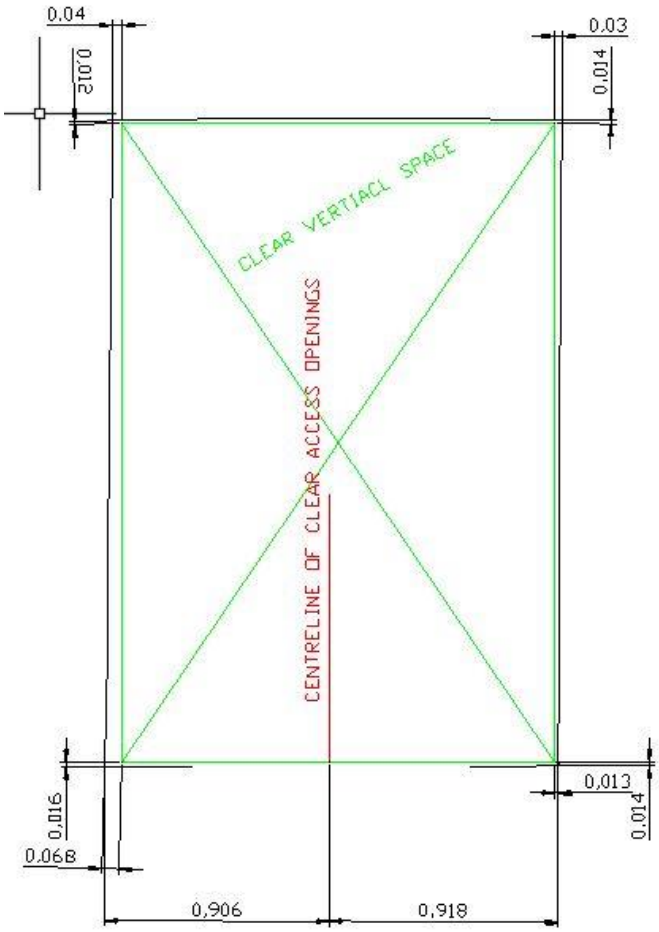
AT ROOF -6m



AT ROOF -8m



AT ROOF -10m



AT ROOF -12m