

QUALITY CONTROL CHECK LIST FOR TERRESTRIAL STATIONARY LASER SCANNING

SURVEY UNDERTAKEN BY: **DATE:**

SURVEY PROJECT DESCRIPTION: **REPORT NO:**

JOB NUMBER:

- Note:**
- i) The surveyed deliverables for a survey undertaken by laser scanning shall be checked using the relevant quality control check list for that specific survey*
 - ii) This check list shall be used to check and verify the laser survey procedures and requirements as stipulated in TMH11 chapter 14*

PROJECT:

I hereby confirm that this survey was checked against the project specifications and TMH11 survey requirements as stated in the survey instruction/contract documents.

The Items that do not form part of the survey instruction were marked as N/A.

	REQUIREMENTS	Confirmation by a registered Surveyor
1.	SUPERVISION	
1.1	Name of supervisory Surveyor	
1.2	PLATO registration number of supervisory Surveyor	

1.3	General comments on supervision	
2.	EYE SAFETY	
2.1	Was written approval from the Department of Health, in accordance with their Radiation Control Program, submitted	
2.2	General comments on eye safety	
3.	SURVEY CONTROL POINTS FOR LASER SCANNING	
3.1	Is the laser scanning equipped with a compensator	
3.2	Was Point Cloud to Point Cloud registration employed	
3.3	Was the laser scanning control established at maximum 120m intervals	
3.4	For road surveys, were the control points for a dual carriageway established at both sides of the dual carriageway	
3.5	For non-road surveys, were the control established in 120m square grid covering the entire survey area	
3.6	Did any extrapolation take place during the scanning process (scanning outside the control configuration)	
3.7	General comments on survey control	
4.	QUALITY ASSESSMENT PLAN	
4.1	Was a quality assessment plan submitted to the Client prior to the scanning exercise	
4.2	General comments on quality assessment	
5.	QUALITY CONTROL REPORT ON COMPLETION (This quality control is required over and above the quality control requirements stipulated in the various chapters of TMH11)	
5.1	Were the following information supplied:	
	<ul style="list-style-type: none"> Statistical systems report 	
	<ul style="list-style-type: none"> Statistical comparison of Point Cloud data and the 300 meter check cross sections for other surveys than structures 	

	<ul style="list-style-type: none"> Statistical comparison of the final DTM and the 300 meter check cross sections for non-structural surveys 	
	<ul style="list-style-type: none"> Statistical comparison of adjusted Point Cloud data and redundant check points (30m check points) 	
	<ul style="list-style-type: none"> Statistical comparison of final DTM data and redundant check points (30m check points) 	
	<ul style="list-style-type: none"> Scan seam comparison of elevation data from overlapping scans 	
	<ul style="list-style-type: none"> Statistical comparison of the final Point Cloud data and control points 	
5.2	Was the Point Cloud filtered to one layer of points which represents the mean value of the scans	
5.3	Was the noise removed from the Point Cloud data	
6.	FIELD PROCEDURES FOR ROAD SURVEYS	
6.1	Does any scanning setup exceed 120 meter from the previous setup	
6.2	Does any scanning distance exceed 70 meter	
6.3	Is the minimum overlap in scans 5%	
6.4	Are there any shadow areas that are not scanned	
6.5	Were a minimum of four (4) control points observed per setup when a scanner without a compensator was used	
6.6	Was a report submitted on the referencing of the different scans	
6.7	Was a 2m x 2m grid DTM supplied	
6.8	Were breaklines utilized in the DTM	
6.9	Was the quality control report submitted as per TMH11	
7.	SPECIFIC REQUIREMENTS FOR STRUCTURAL SURVEYS <i>Note: The structural survey data shall be evaluated in terms of the structural survey check list Annexure 24.5</i>	
7.1	Were the scanned models geo-referenced to the permanent bridge control points	
7.2	Were the scanning observation distance limited to maximum 70 meter	
7.3	Was a minimum 30% overlap achieved between adjacent scans	
7.4	Was a scan density of 5mm achieved at the bridge abutments, top of bridge piers and the bearings	
7.5	Was the remainder of the bridge structure scanned at a maximum interval of 10mm	

7.6	Is the scanner equipped with a compensator	
7.6.1	If yes, were a minimum of two control points and at least one redundancy point observed per setup	
	If no, were a minimum of four control points observed per setup	
7.7	Was the final Point Cloud filtered down to a single layer of points which represent the mean value of all the scans	
7.8	Was the noise removed from the Point Cloud	
7.9	Was the Point Cloud data base submitted in ASCII format	
8.	GENERAL COMMENTS	

I, the undersigned, being the representative of the appointed survey company on the above project, hereby certify that:

1. All information required in the project specifications is hereby supplied.
2. All field and office checks have been carried out in terms of the relevant requirements and specifications.
3. All data supplied conforms to the relevant requirements and specifications for this project

Signed at.....this.....day of

Signature:.....

Plato Registration Number:.....

Name of Surveyor:.....