

Section 3. Archiving Laser Scan Data#

3.2 Acquisitional Metadata

Acquisitional metadata is divided into two levels, Project level metadata and Scan level metadata. Both project and scan level metadata should accompany the archival of the original scan datasets. The specifications provided by English Heritage (2007) are the basis for the metadata standards listed below. Additional specifications not listed in the English Heritage document are also suggested.

The project level metadata is the information needed to completely document a single scan project. A project will typically include multiple scans over a definable object or coverage area. For example, if two separate monuments/structures are scanned at a site then each monument will have its own project level metadata. Scan level metadata is information collected that pertains to each unique scan within a project. Most of the metadata entries are self explanatory however additional descriptions may be included where deemed necessary.

3.2.1 Project Level Metadata

Element	Description
Project Name	Name of the project
Name of monument, survey area, or object	Name of object, monument, or area scanned
Monument/Object Number	The ID number or code, if applicable, of the object or monument
Monument/Object Description	Brief description of the monument/object being scanned
Survey Location	Exact location of survey with complete address and/or coordinates
Survey Date(s)	Dates(s) of survey
Survey Conditions	The overall weather trend during survey (sunny, overcast, indoors, etc.)
Scanner Details	Details of the instrument(s) with serial number(s) and scan units
Company/Operator Name	Details of company and scan operator name
Control data collected?	If yes, then list <i>control_file_name.txt</i> .
Turntable used?	Yes/No
RGB data capture?	If yes, then specify whether: - Internal or external? - Was an additional lighting system used? If yes, then provide a brief description of the lighting system.
Estimated Data Resolution	The estimated data resolution across the monument or object.
Total Number of Scans in Project	Total number of scans
Description of final datasets for archive	What datasets will be archived (include file names if possible)
Planimetric map of scan coverage areas	If applicable, then provide the image name.
Additional project notes	Additional notes
Images from survey	Optional, if yes, then provide the image file names

3.2.2 Scan Level Metadata

Element	Description
Scan Filename	The name of the scan. A suggested filename for original raw scans for archiving is in this format: <i>ProjectName_scan1.txt</i> .
Scan Transformation Matrix	The name of the transformation matrix used in Global Registration. Suggested file name: <i>ProjectName_scan1_mtrx.txt</i>
Matrix Applied to Scan?	Y/N Has the matrix been applied to the archived scan?
Name of monument/object	Name of monument or object being scanned
Survey Date	Date of scan
Data Resolution	Fixed resolution or data resolution at specific range.
Number of Points in Scan	Total number of points in the scan file
Additional Scan Notes	Additional notes
Scanner Technology	TOF/Phase/Triangulation
First or Last Return (TOF scans only)	Indicated whether first, last, or both returns were specified
Camera Exposure Settings (If RGB acquired)(TOF and Phase scans)	Exposure settings set on scanner
Frequency Settings (Phase scans only)	Frequency settings set on scanner
Noise Settings (Phase scans only)	Noise settings set on scanner
Lense or FOV Details (Triangulation scans only)	Indicate which lense or FOV was used during scan

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