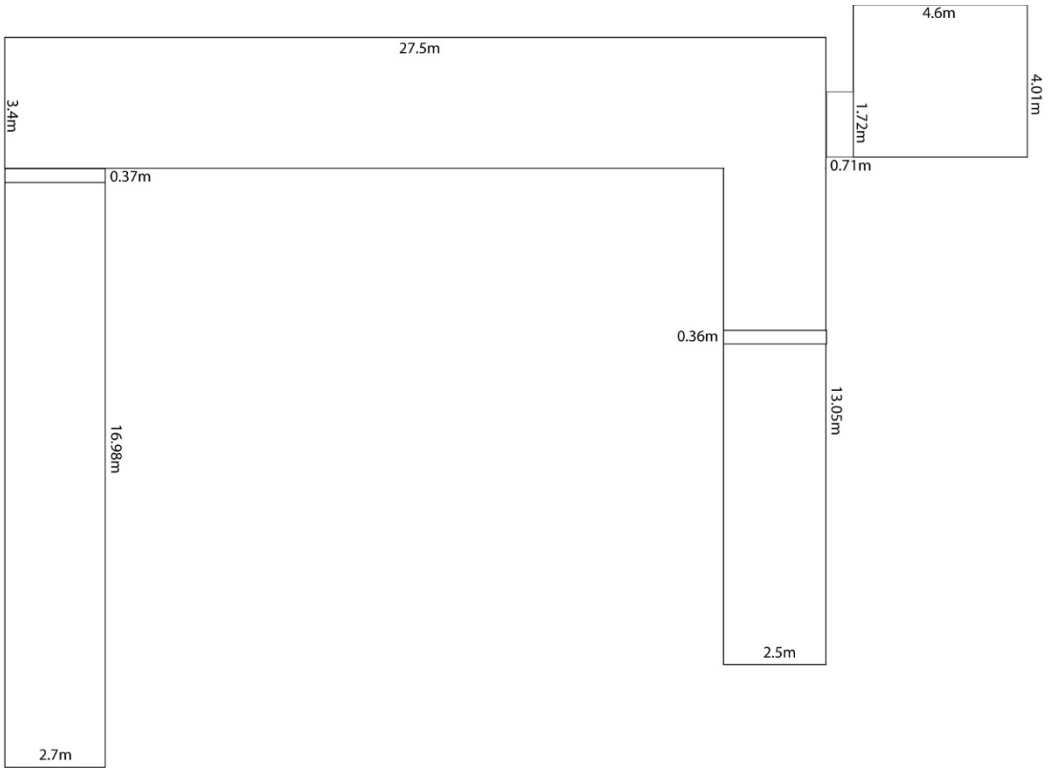
Newcastle University, School of History, Classics and Archaeology - 3D Scanning and Structure from Motion (SfM) of Buildings and Objects at Parco Archeologico di Pompei and Parco Archeologico di Ercolano 2017-2018

JOB
Job title:
House of the Cryptoporticus, Pompeii

Client:
Expanded Interiors

Reason for scanning:
To make an accurate record of the House of the Cryptoporticus for visualization and display. To derive orthographic elevations from the point cloud to enable planning of the Expanded Interiors installation.

Deliverables:
Raw Data in .FLS for processing and .XYZ format for archiving.
Photographs of the scanning process.
Orthographic elevations in .TIF format derived from Faro Scene 6.2
Metadata for the scanning process



SITE
Brief description:
The House of the Cryptoporticus, Parco Archeologico di Pompei

Approximate size (m) H x W x D:
See figure above

Nature of surface:
Stone and stucco with frescos

Level of detail: (size of smallest feature to be recorded)
0.5cm

ENVIRONMENT

Location of scanning:(inside/outside, public access, tent etc.)
All scans were recorded inside with no public access to the site during scanning.

Lighting (natural, fluorescent etc.):
Natural daylight only

SCANNING PROCESS

Carried out by:	Alex Turner
Date:	05/07/2017
Time taken:	4 hrs scanning
Scanner:	Faro Focus X330

Tripod: Gitzo standard and 5m elevating tripod

Power source:	Battery
Scanning distance (m):	10m approx.

Scanning parameters: Resolution ¼ = 43.7 million points 6mm resolution at 10m.

Quality threshold = 3

Number of stations: 20

POST-PROCESSING
Carried out by:
Alex Turner

Software (point cloud):
Faro Scene 6.2

Registration:
Maximum mean target distance error range was 0.6mm to 2.77mm

Software orthographic images and walkthrough:
Faro Scene 6.2 and ArcGIS 10.5
Point Cloud manipulation for walk-through: Autodesk Recap Pro

Data "cleaning":
Topological abnormalities were removed using Faro Scene 6.2. The project point cloud was created after cleaning.

OUTPUT
Point Cloud
Faro Scene Project in .lsproj format with scans in .FLS format
Project point cloud in .XYZ format (.ZIP for archiving)

Orthographic Images
Orthographic images of all elevations were created in .TIF format with a .TXT information file for each image.

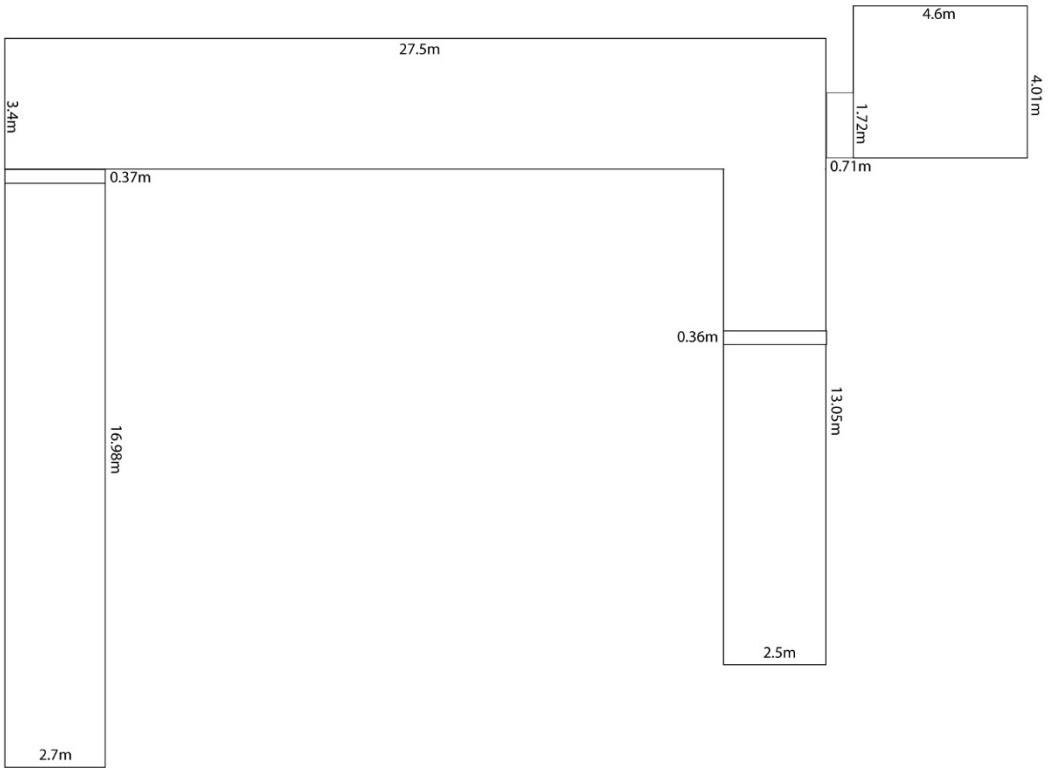
Newcastle University, Fine Art Department, Documentation of wall paintings and rooms of two houses at Parco Archeologico di Pompei and Parco Archeologico di Ercolano 2017-2018

JOB
Job title:
Photographic documentation of the cryptoporticus complex at the House of the Cryptoporticus, Pompeii

Project:
Expanded Interiors

Reason for photographic documentation:
To record and document the cryptoporticus complex at the House of the Cryptoporticus for research, visualization and installation development.

Deliverables:
Photographs in .TIF format derived from Canon EO5 digital camera.



SITE
Brief description:
The House of the Cryptoporticus, Parco Archeologico di Pompei

Approximate size (m) H x W x D:
See figure above

ENVIRONMENT

Lighting (natural, fluorescent etc.):
Natural daylight only

PHOTOGRAPHY

Carried out by:	Catrin Huber
Dates:	July 2017
Camera:	Canon EOS 5D digital camera

POST-PROCESSING
Carried out by:
Catrin Huber

Software:
Photoshop 2014.2.1

OUTPUT
Photographs in .TIF format