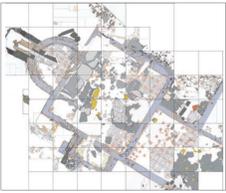




BATH COMPLEX - SURVEY

CARSULAE BATHS RESEARCH PROJECT - SAN GEMINI PRESERVATION STUDIES



Comparative Analysis of Different Survey Method Products

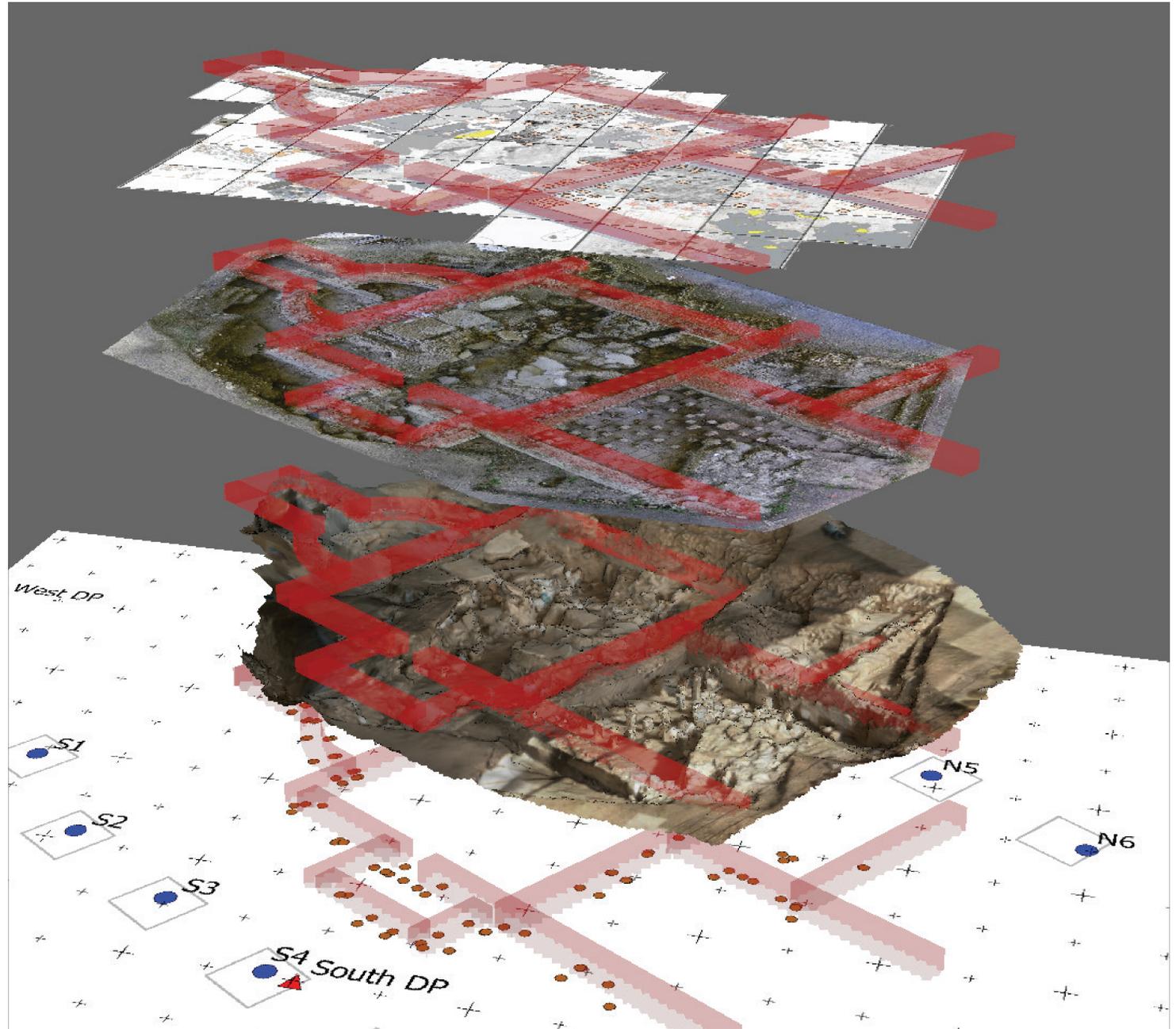
The aim of the exercise was to compare the different products created from a number of survey techniques in order to understand any errors apparent in any of the final images.

The five methods examined were the drawn site plan as of 2016, Total Station survey points recorded in 2012, photogrammetric orthophoto taken in 2016 and in 2018, and the laser scan data taken in 2016.

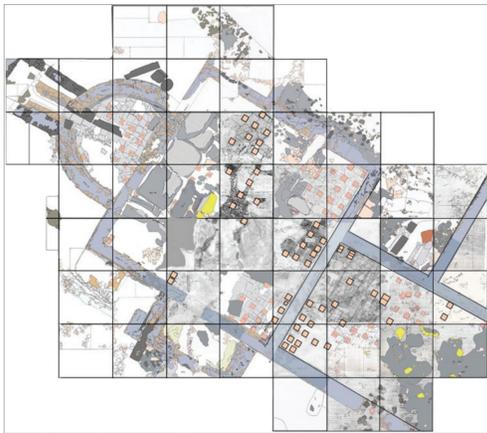
It must be acknowledged that this study was not to compare the various survey methodologies and techniques as insufficient information of each of the processes was available to make a detailed comparative analysis. Comparisons between the methodologies can be found in the scientific literature. Common reference points for each of the methods used, such as referencing to the established site datum, or the position of station or control points used by particular methods, were not established for the purpose of this study and should be considered for future examination. It must be acknowledged that errors may be introduced in images when matching scales and alignments, however image manipulation was kept to a minimum as practicable.

A number of image processing and modeling software were utilised, such as Photoshop and Maya, however AutoCAD was used for accurate scaling and measurements between images.

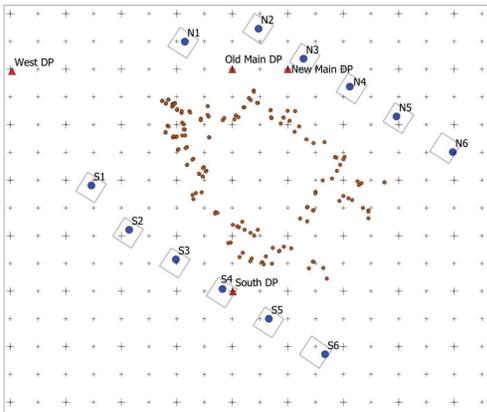
Although not a rigorous analytical process, comparison undertaken between each image using known measurements from the site identified some inconsistencies in each of the images. As a baseline dataset has not been properly established in order to provide a suitable control by which all images can be measured, it is impossible to provide any conclusions over the accuracy of one method over another in this particular case. As previously mentioned controlled comparisons are available in the scientific literature. The results do indicate that there are measurable discrepancies between each image, and therefore these discrepancies must be taken into consideration when using one image or another as a reference.



Wall Location Comparison in Plan



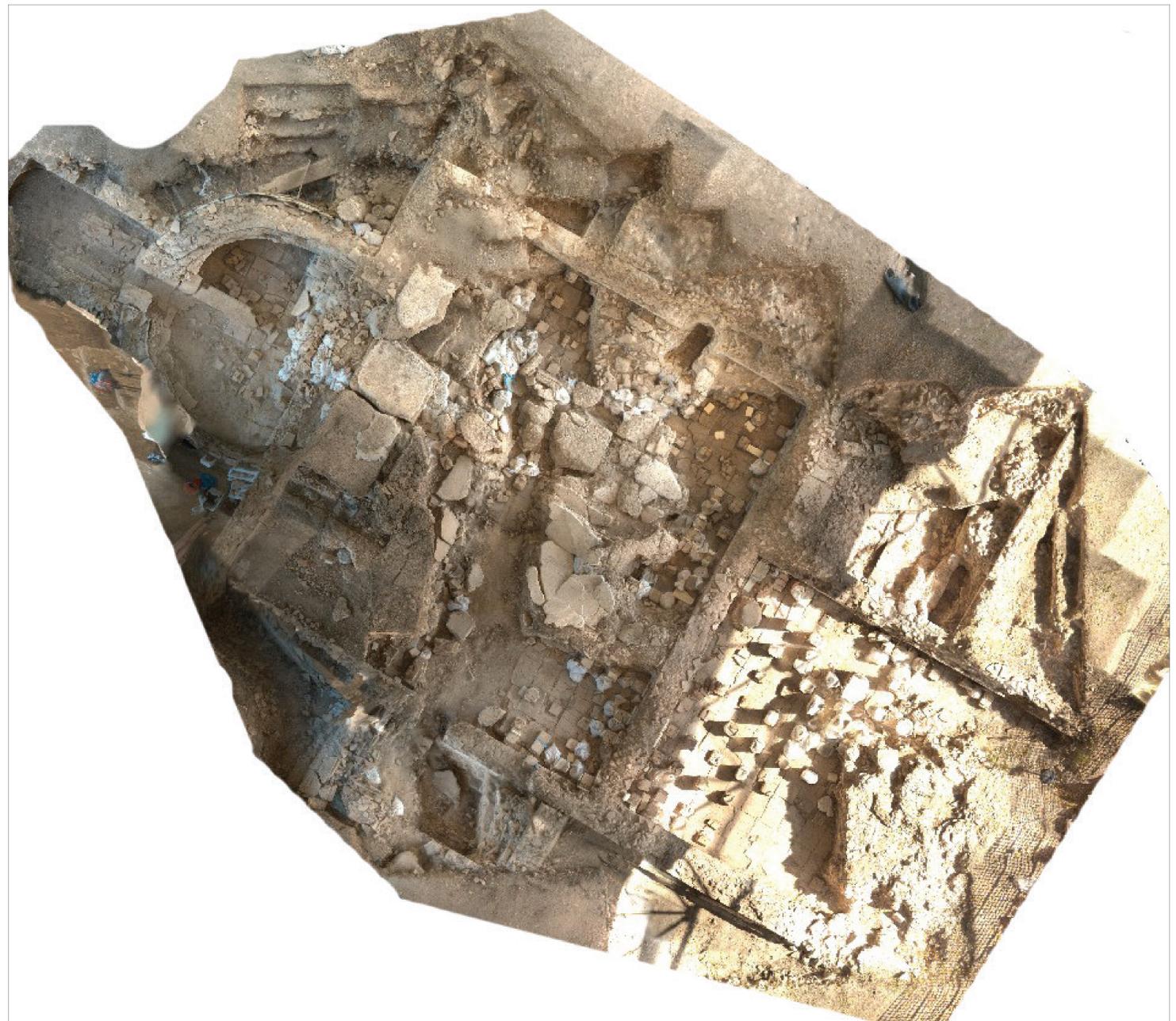
Archaeologists Plan



Total Station Record, 2012



Ortho Photo, 2016



Ortho Photo, 2018