

THE USE OF DIGITAL TOOLS FOR THE CHARACTERISATION OF ARCHAEOLOGICAL SITES BY SURFACE ARCHAEOLOGICAL SURVEY

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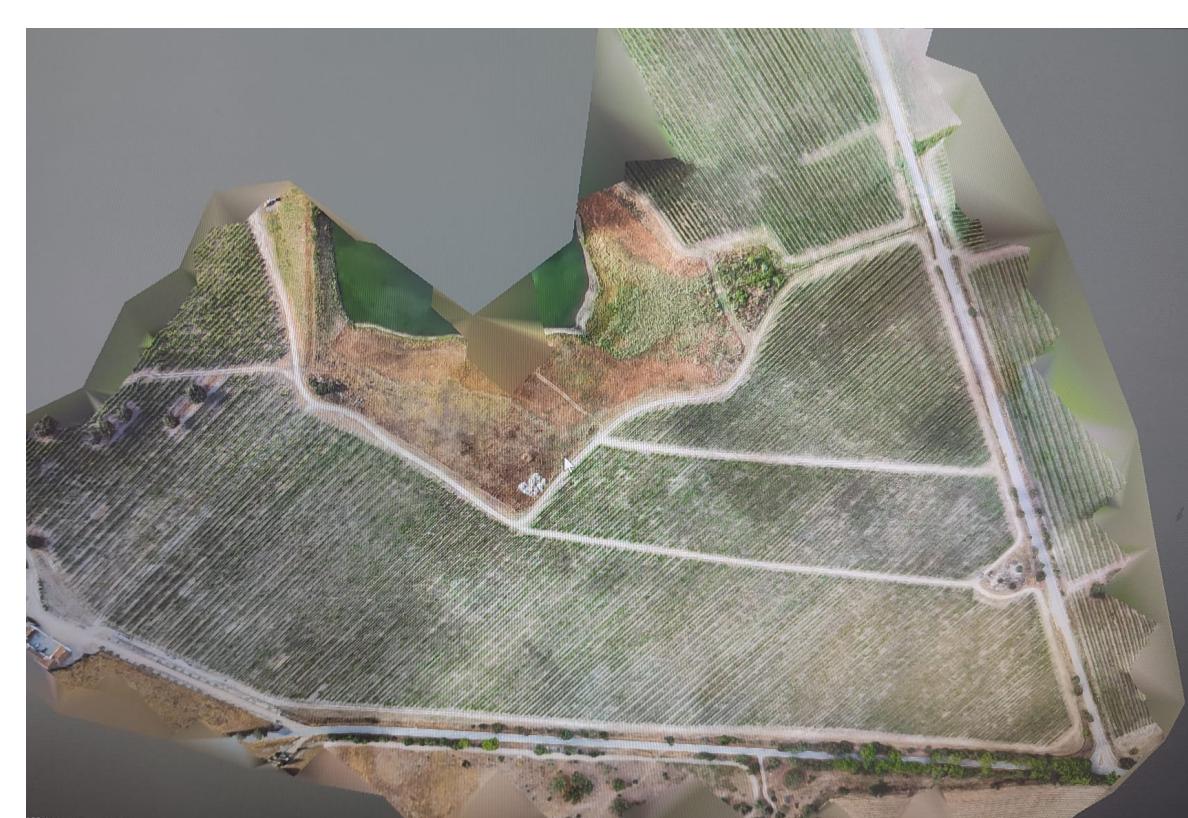
The use of archaeological survey for the characterisation of Roman sites and their surroundings is not a new topic. We present here the proposal that we have carried out in recent months, emphasising an exhaustive record that allows us to assess the quality of the archaeological survey.

- Firstly, we opted for an intensive archaeological survey with a spacing between surveyors of 5 metres. The intensity changes depending on the terrain. In our case, the three types of land we prospect are cultivated areas, pasture and vineyard. In cases of poor visibility in dehesa, we choose to reduce the intensity to 3 metres.
- Secondly, all archaeological finds are geo-referenced in the field. In addition, all non-constructive archaeological material is collected (also from other chronologies), with the aim of being able to detect identification errors in the field due to poor visibility, for example. In the case of doubts or significant constructive material, it is also collected.
- Thirdly, for each surveyed plot, each prospector has to fill in a sheet indicating issues such as GPS used, visibility, GPS error or field experience. Each of these factors must be indicated on the sheet with a number according to the criteria specified in the sheet's instructions. This allows for a better homogenisation of the data afterwards.



The sheet allows us to know which areas each prospector has surveyed, the previous experience he/she has in the field and the characteristics of the area he/she surveyed.

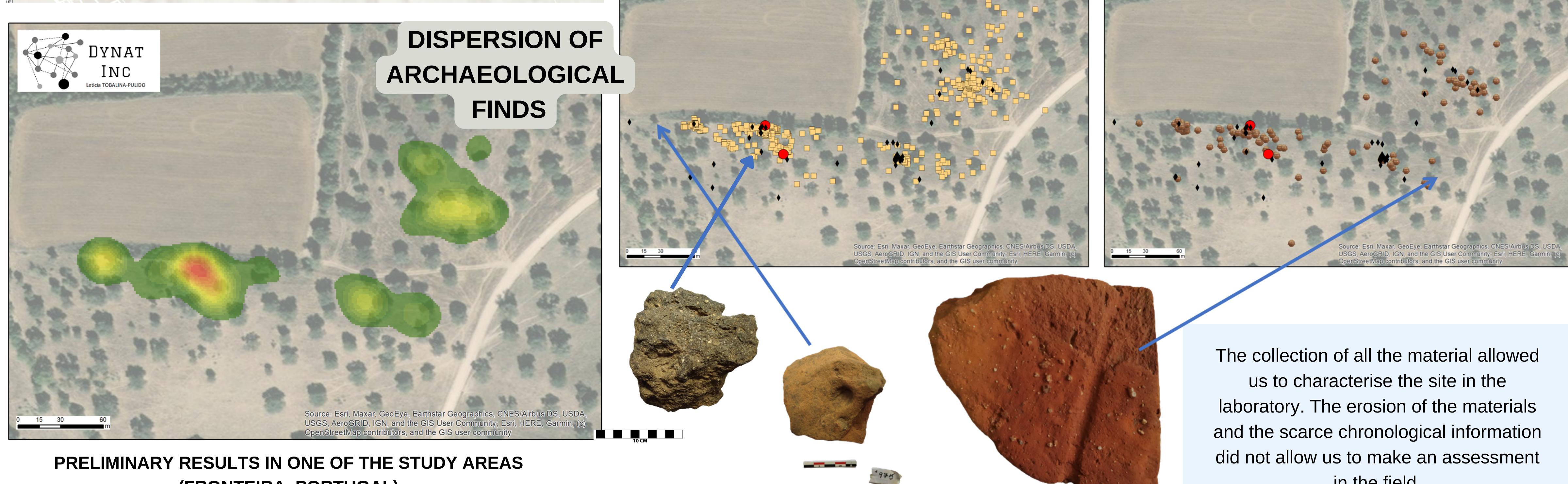
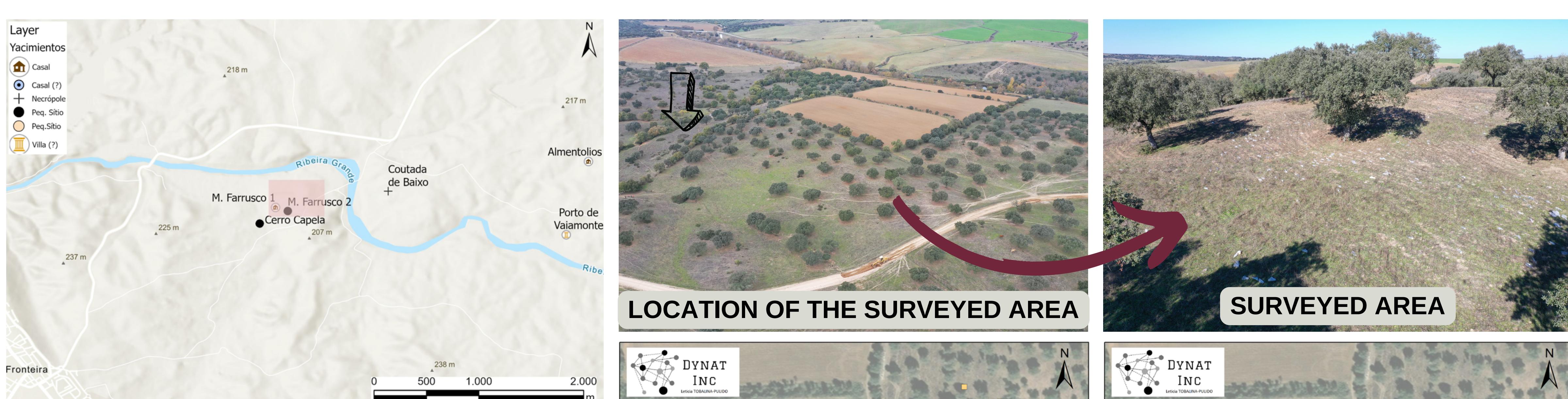
This methodology allows for agile registration (georeferencing and collection are carried out at the same time) and in a very exhaustive manner. each fragment of material has a unique code that allows it to be spatially located in GIS.



Another problem we may have is the lack of basic cartography in one of the areas. For this purpose, we have chosen to generate mapping from overlapping drone photos. We have used a drone to carry out a photogrammetry of the terrain. Since we were in an area with vineyards, photogrammetry was easier to carry out.

TERRAIN PHOTGRAMMETRY

In addition, this type of survey is often applied to the thematic collection of archaeological material (e.g. concentrations of slag or fragments of Campanian pottery). Here it is applied globally, considering the field recording as a way in itself to measure the quality of the survey.

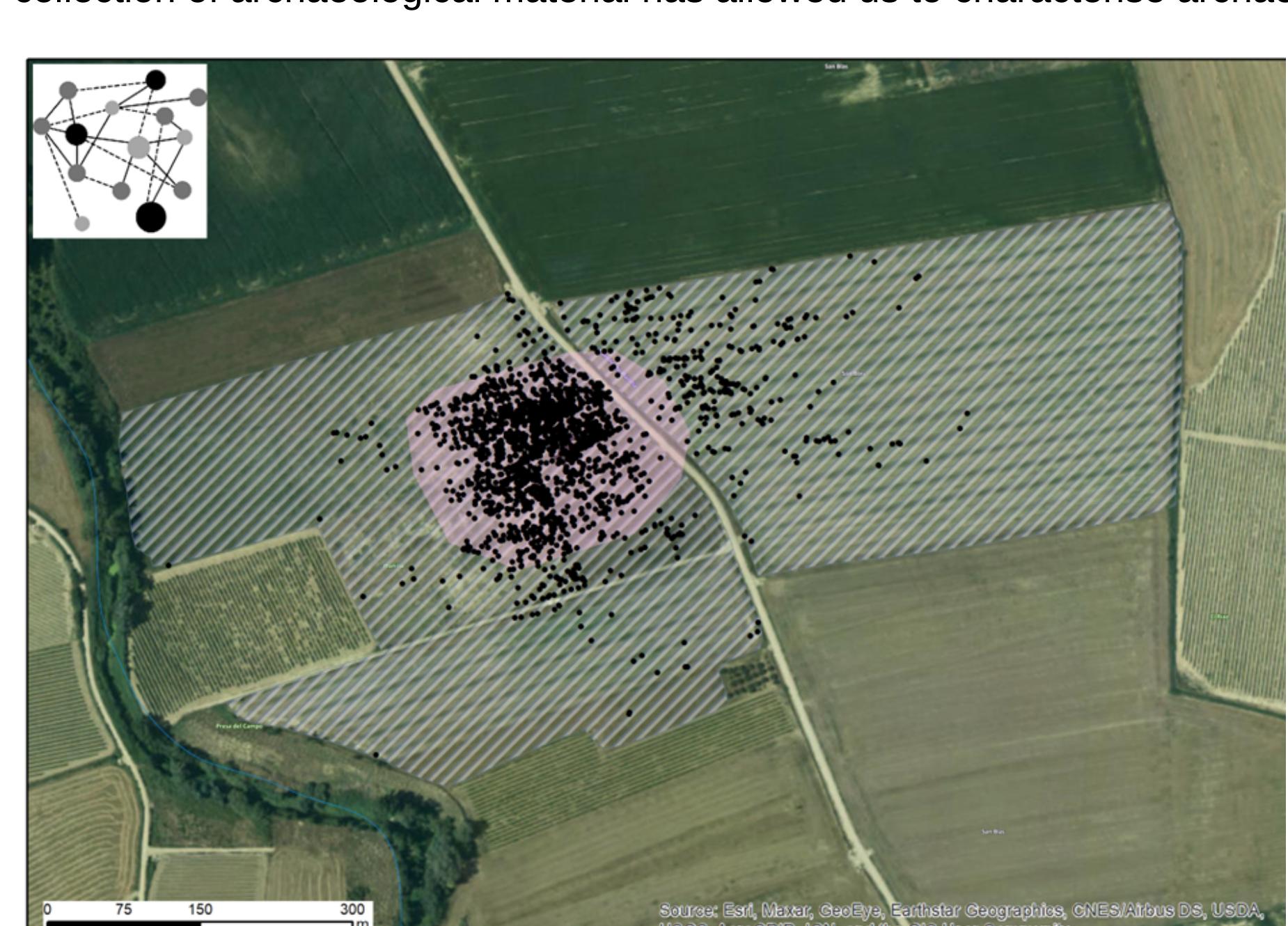


The first place where we applied it was Fronteira (Portugal). It is an area previously extensively surveyed and recorded on the archaeological chart as 3 settlements. In addition, one of the problems archaeologists encountered when prospecting it was the difficulty of characterising it. The aim was to characterise the area and determine whether there are three areas of the same site or three separate sites and to characterise it. During the survey we located a large amount of laterite building material. There was also a significant concentration of scoria and dolia.

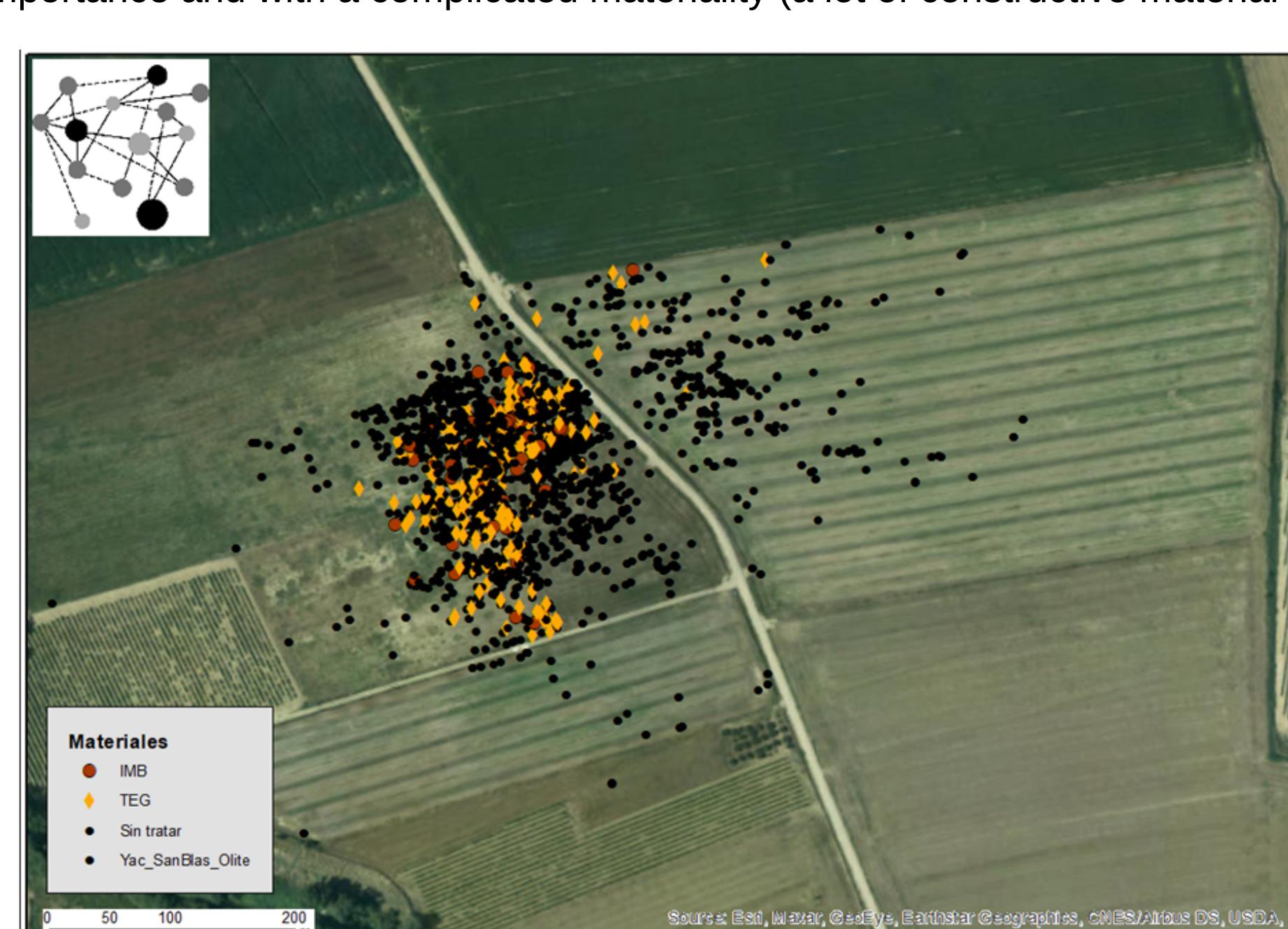
It is also significant that some imported materials were found, such as a fragment of an amphora made of paste from the Lower Guadalquivir. It is curious that neither Terra Sigillata nor other fine pottery is recorded.

Many loom weights were recovered too. Only common pottery and dolia were recorded. The concentration of material, moreover, shows the three concentration patches, possibly corresponding to those indicated in the literature as three archaeological sites. The distribution of archaeological material extends over almost 2ha, making it a settlement of significant size.

Considering the classification of L.G. Pérez-Aguilar (2018) for the southwest of Spain, we can consider that we are dealing with a large farm-type site. Perhaps, in the event that future interventions extend the area of distribution of materials, we may be looking at a small settlement. There is very limited datable artefacts, although a fragment of a highly eroded amphora dates to the 1st century AD. The use of intensive archaeological prospection with the systematic collection of archaeological material has allowed us to characterise archaeological sites from the Roman period of lesser importance and with a complicated materiality (a lot of constructive material and little datable material).



The other space we are currently working on is in Olite, Navarra. This involves the characterisation of a specific site that is already known, in order to try to establish functional zones within the site itself. In this case, the georeferencing of all site materials has allowed us to distinguish two functional spaces in the GIS: one residential and the other which appears to be more productive. The dispersion of laterite material, moreover, gives us many clues as to the location of the structures.



We consider several perspectives for the future. Firstly, to use a tablet in the field to record materials in order to speed up post-processing. Secondly, to test the methodology with enclaves of lesser materiality in other areas of the Iberian Peninsula. Finally, we believe that the proposal is quite streamlined and allows for a more exhaustive record.

Carneiro, A. (2005). Carta Arqueológica do Concelho de Fronteira. Edições Colibri, Lisbon.

Pérez Aguilar, L.G. (2018). Termodinámica y poblamiento humano en el bajo Guadalquivir durante la antigüedad tardía (siglos III-VI d.C.). Un enfoque darwiniano. (Tesis Doctoral Inédita). Universidad de Sevilla, Sevilla.

Trément, F. (2013). Les Arvernes et leurs voisins du massif central à l'époque romaine Tome 1, Clermont-Ferrand.

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