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Micromorphological analysis of roman roads functioning: Evidence of rhythms of human trampling and vehicle traffic (Northeast of France)

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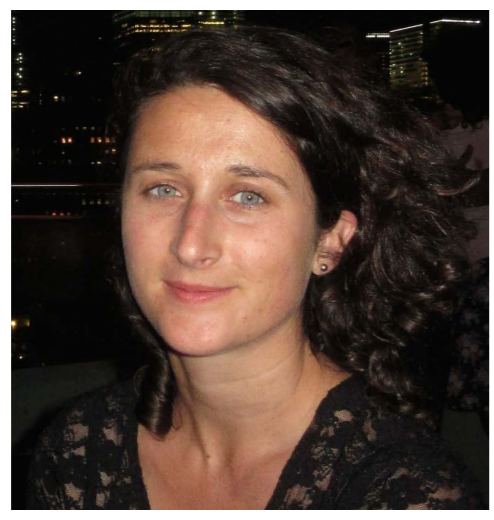
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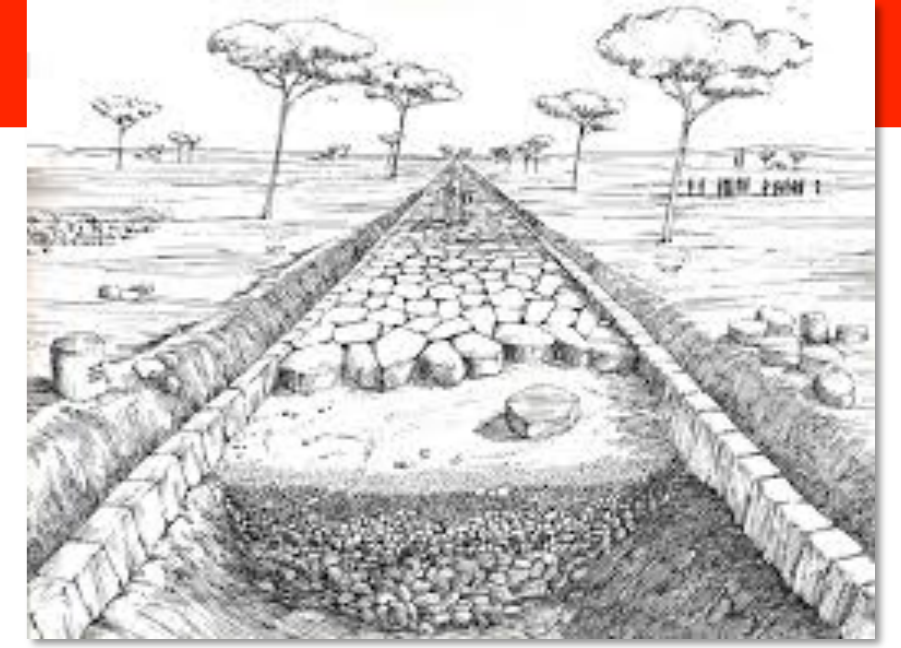
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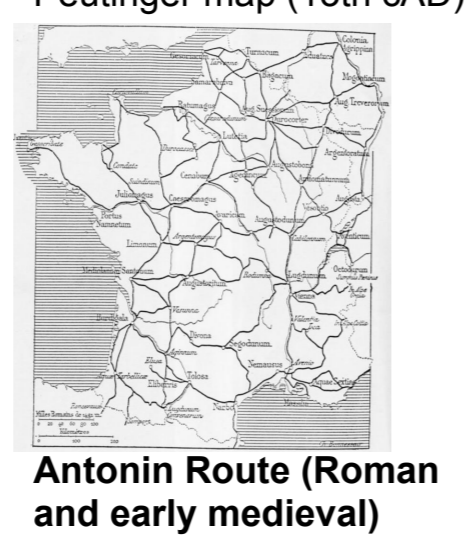
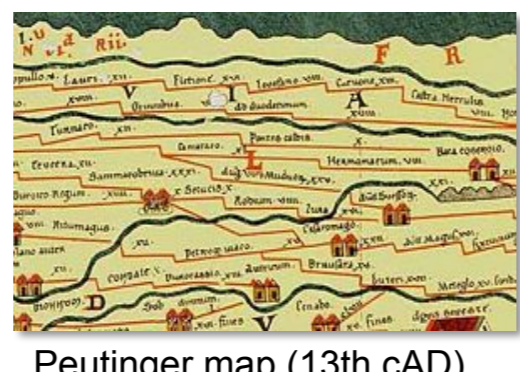
Introduction & Objectives

Roads & Streets

⇒ Elements that structure town planning
⇒ Installation, organization, shifting & persistence related to urban dynamic

Archeological questions

⇒ Construction / refectons techniques ?
⇒ Identification / location of circulation surfaces ?
⇒ Status of the streets & roads ?



Current studies focus on:

⇒ The routes and the pattern of the street / roads in urban / rural context (based on historic documents & maps, archaeological sites map)

Lack of studies on:

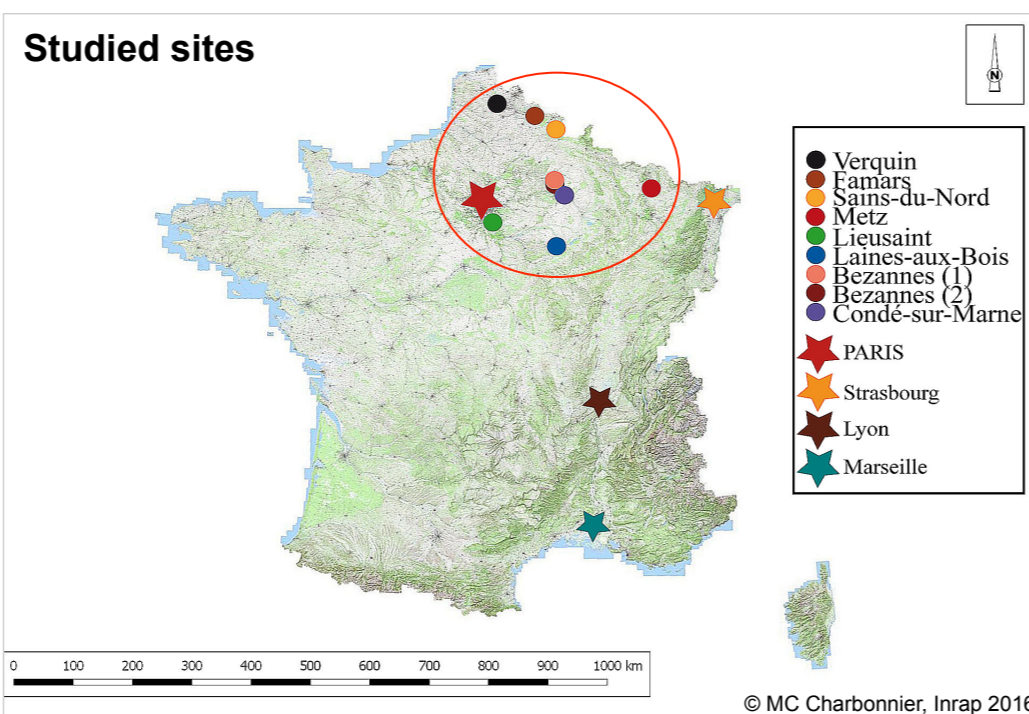
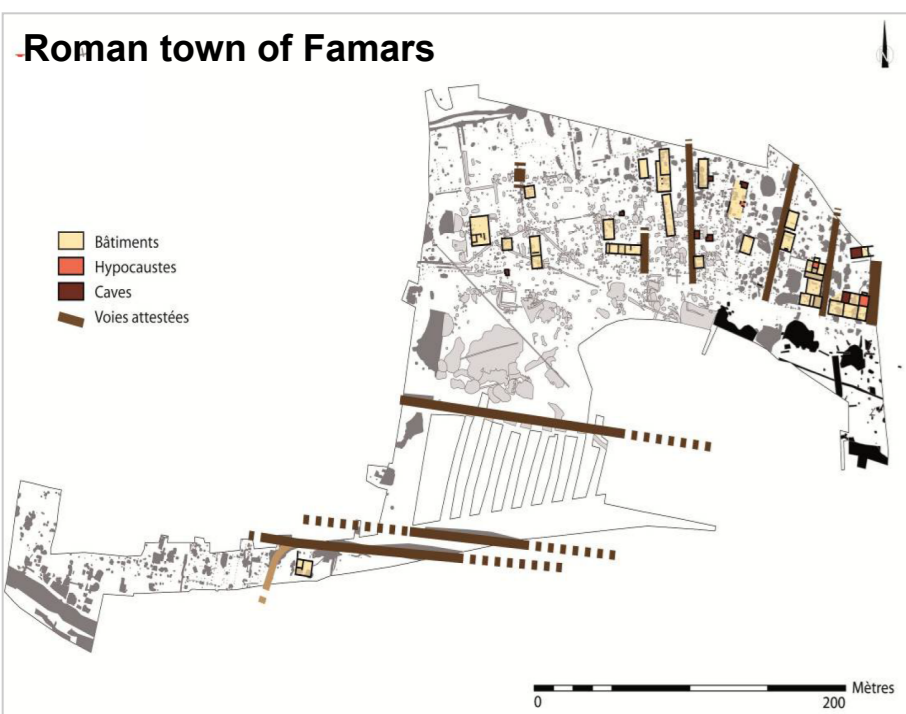
⇒ The sedimentary expression of traffic: typical street improvements, trampled layers or layers related to vehicle traffic

Our objectives are:

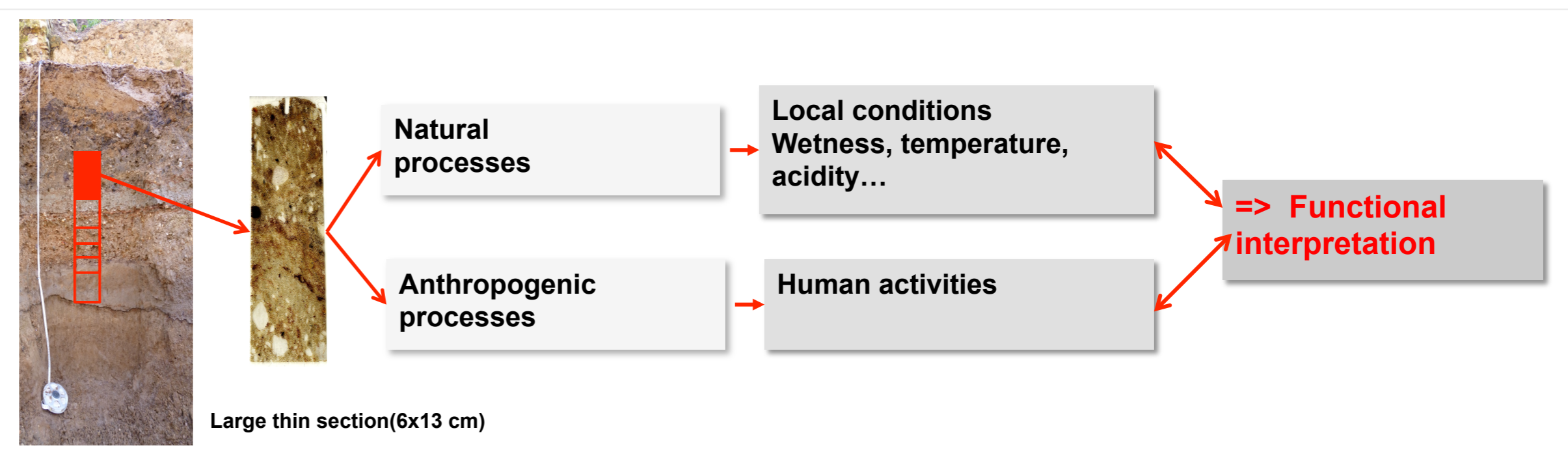
- ☞ To identify & characterize roads / streets from the field to the microscopic scale
 - ▶ Intensity / Frequency of trampling or traffic
 - ▶ Typical pattern of layers & spatial organisation of circulation areas
- ☞ To specify the anthropogenic activities and the function of these areas

Material & Methods

Roads sections in different contexts (rescue archaeology)

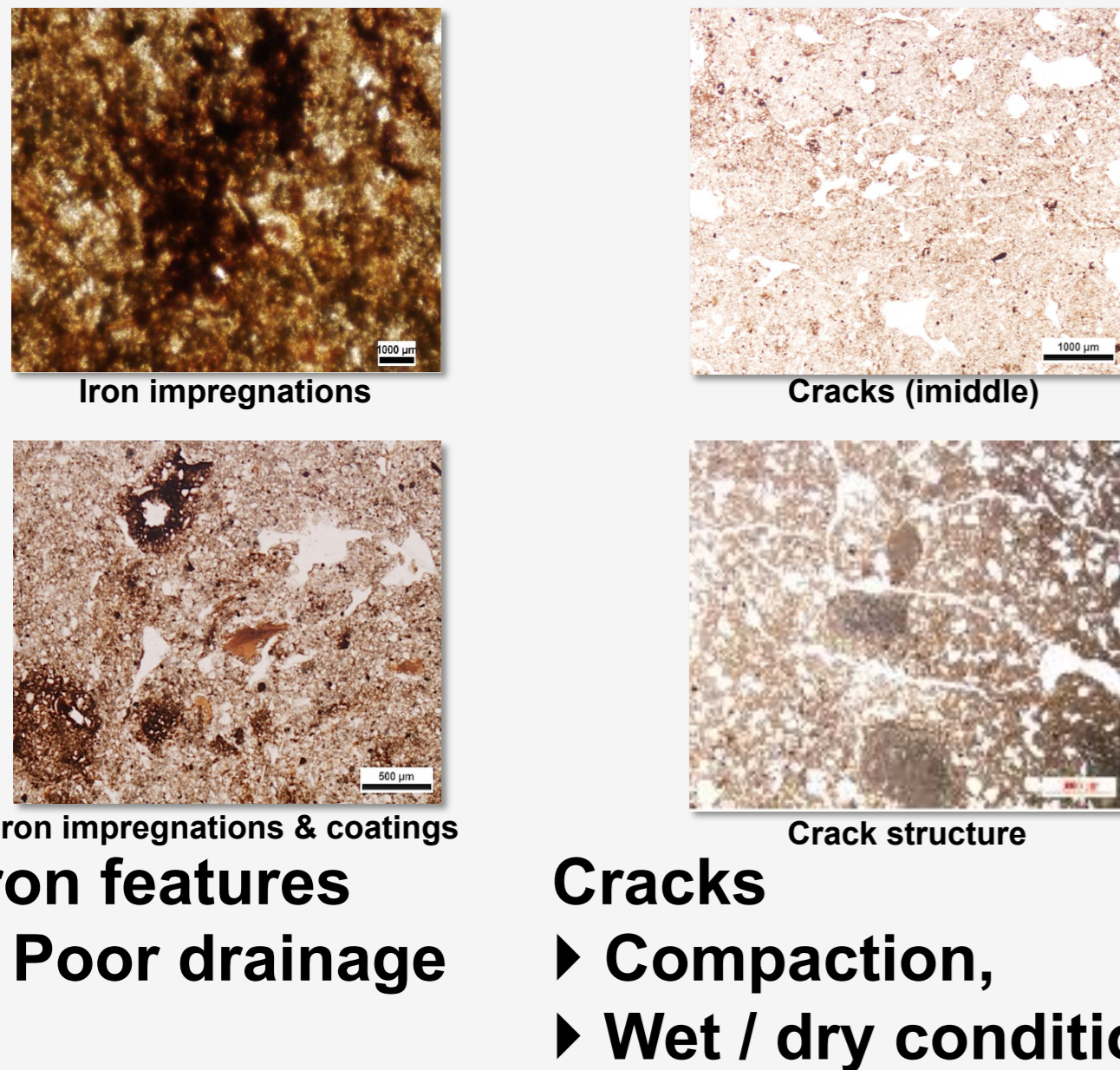


Method: Stratigraphic analysis from the field to microscopic scale

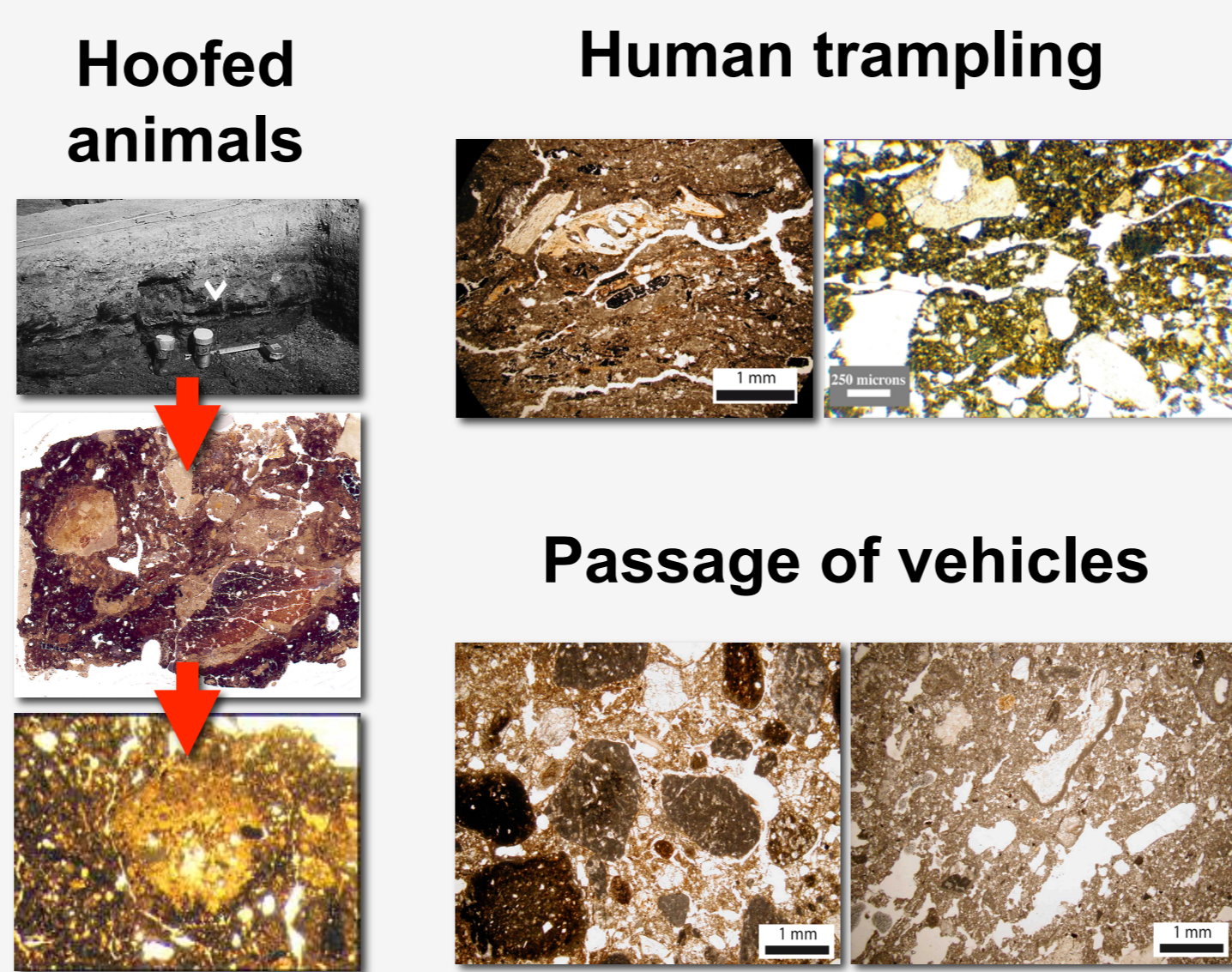


Results: Diagnostics features of environmental conditions, trampling & passage of vehicles

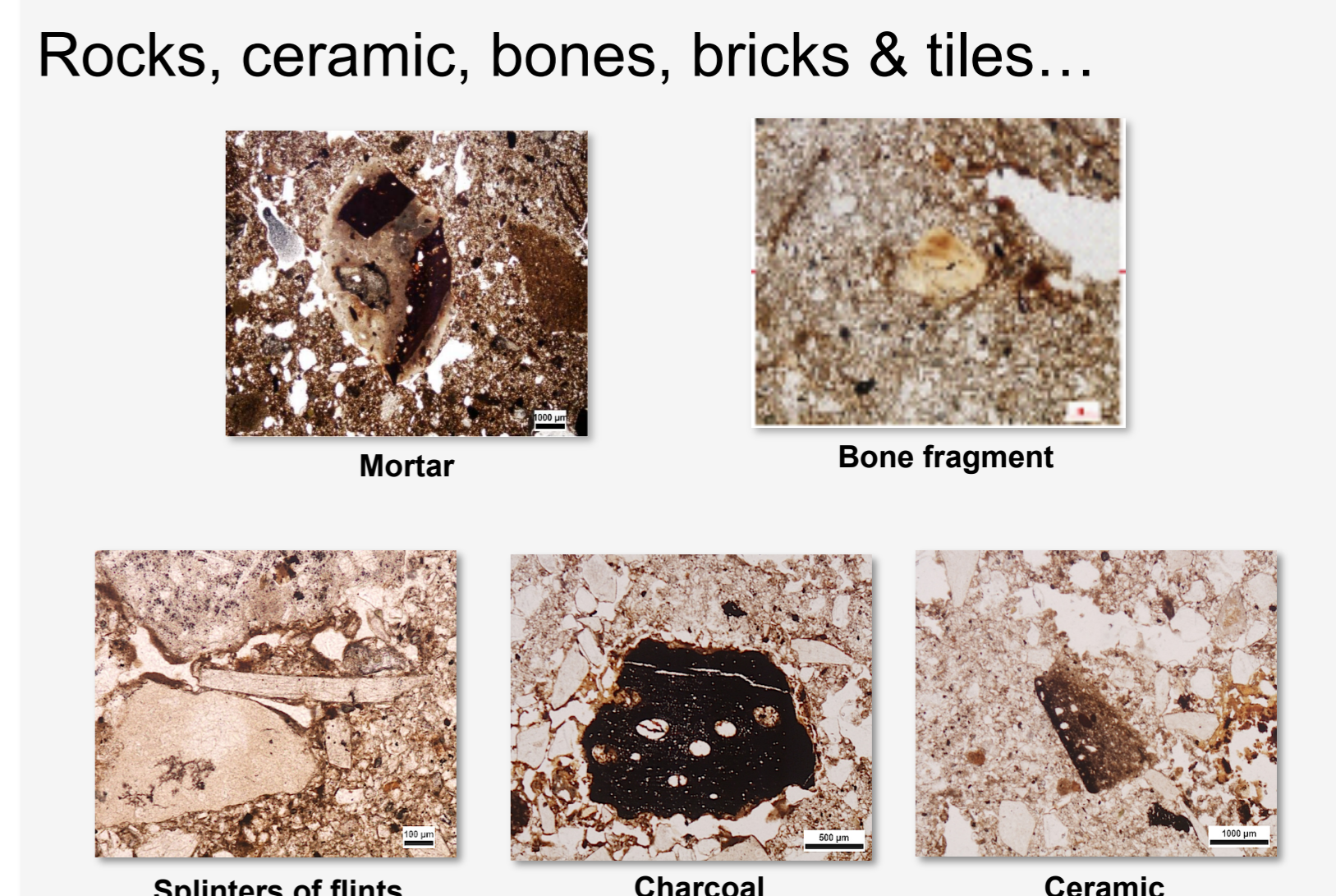
Features related to local conditions ▶ Degree of wetness / water logging



Features related to local circulation ▶ Type & Intensity

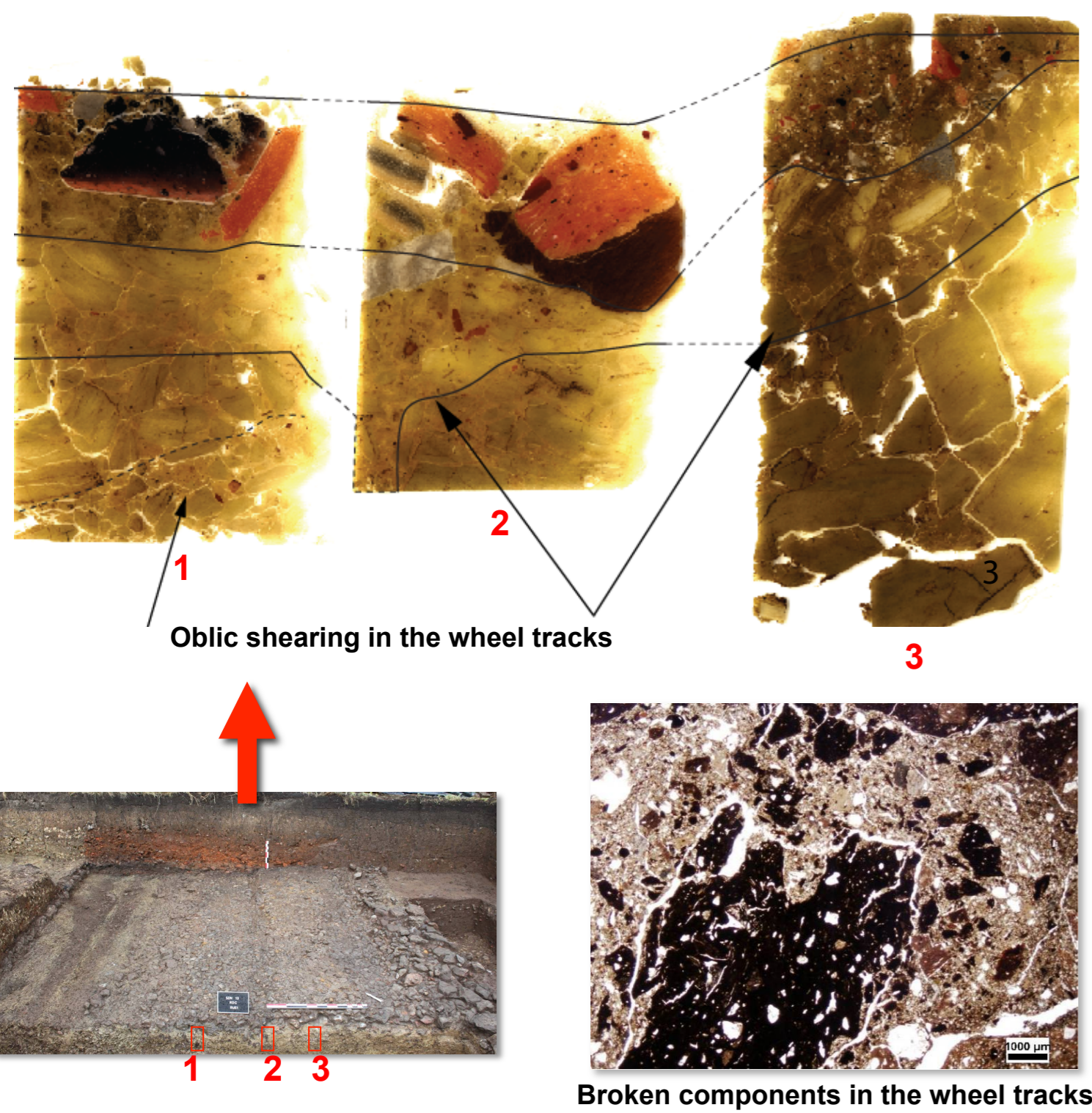


Components related to human activities in the surroundings areas ▶ Multi activities or areas reserved to traffic

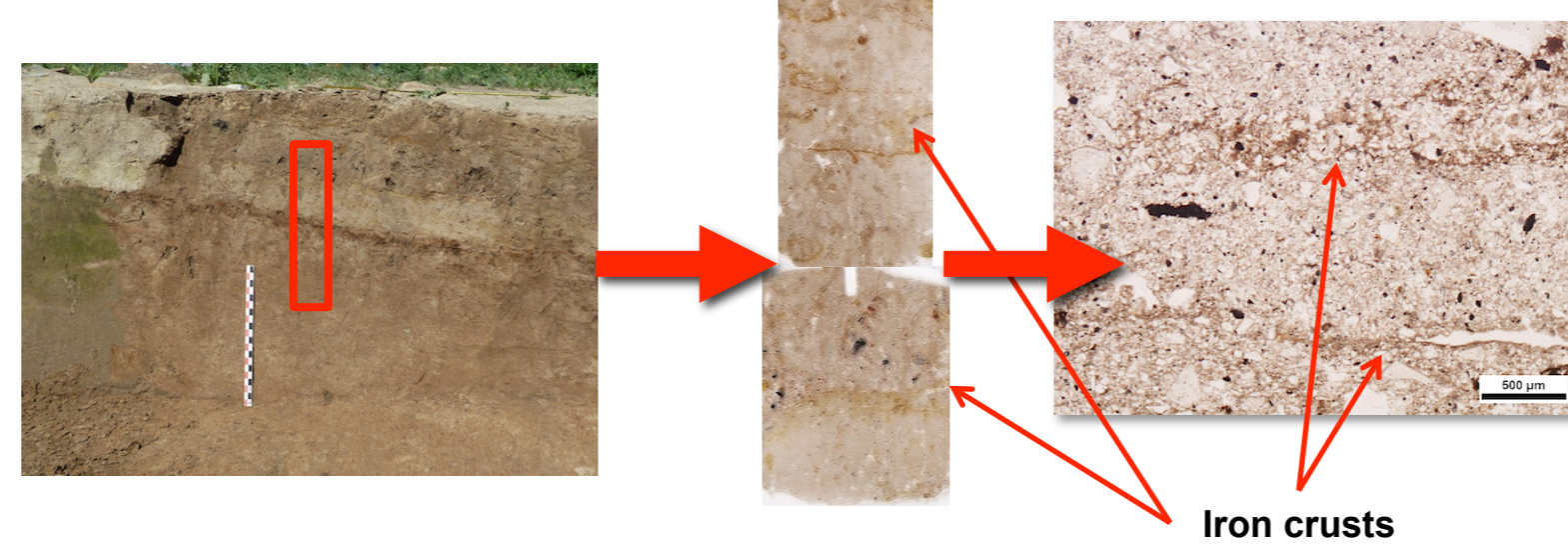


Results: Selected types of functioning

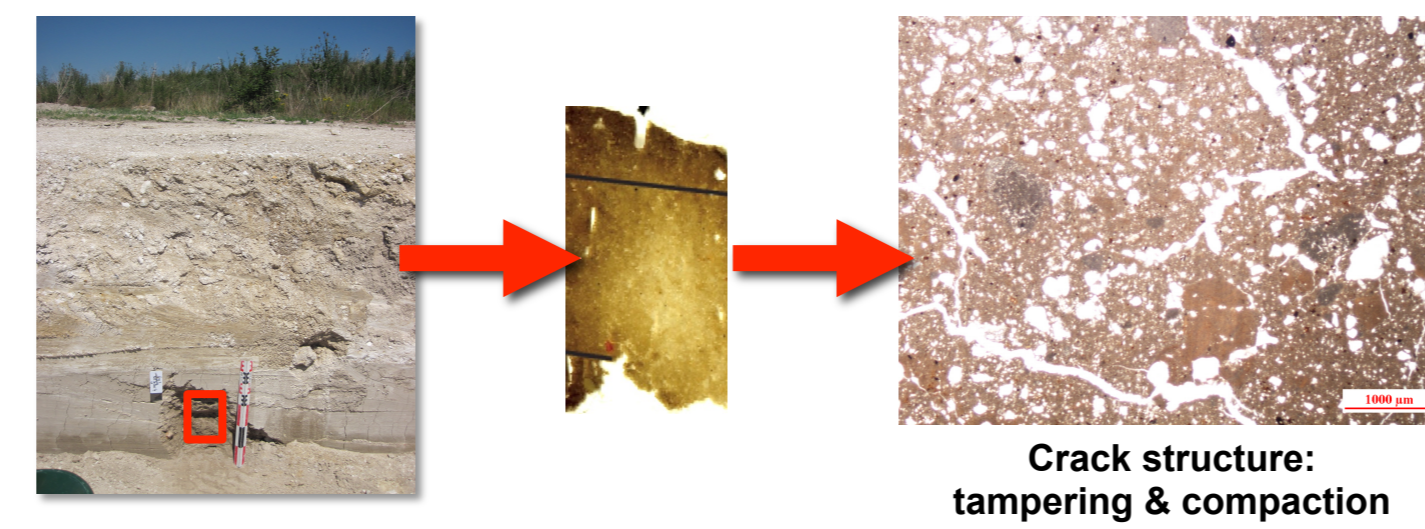
Wheel tracks on scraped soil (Sains-du-Nord)



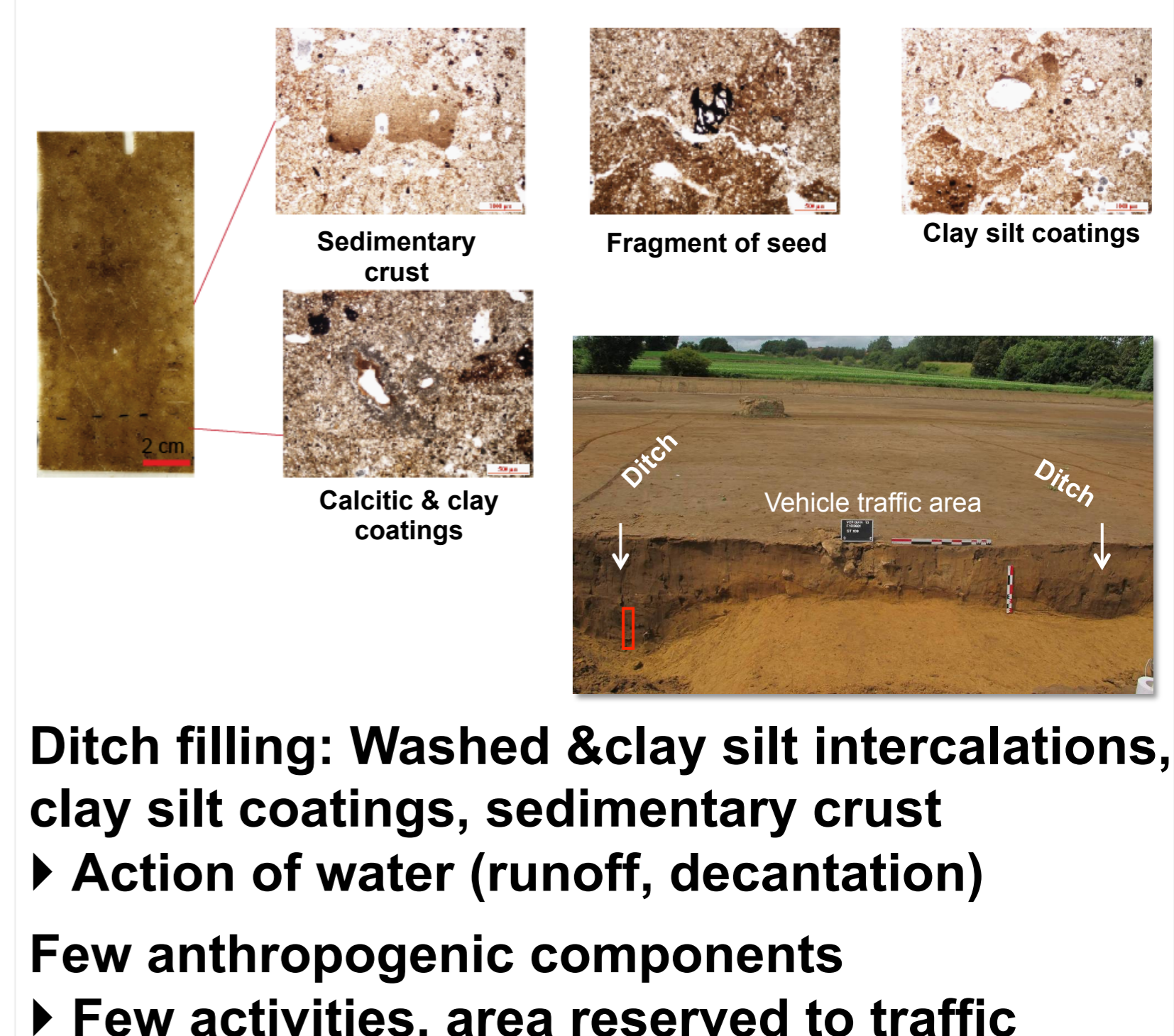
Superimposed non constructed circulation areas: Fine surfaces of circulation - Iron crusts (Famars)



Thick & compacted traffic layer (Bezannes)



Ditches on each side of the road: Functioning of the left one



Conclusions

Field work + micromorphological analysis provide useful informations about the nature of the traffic layers and their formation processes. It shed a new light on these layers, and shows that they should not be considered as one massive deposit or superimposition of backfills but should be investigated with the same geoarchaeological methods and the same care as others archaeological layers.

