

Water supply strategies and urbanisation conditions in Moissac (southwestern France) during the Middle Ages a historical, archaeological and sedimentary study

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Quatenaire 13 – 14-18 mars 2022

Inrap⁺

Institut national
de recherches
archéologiques
préventives



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Jean Jaurès

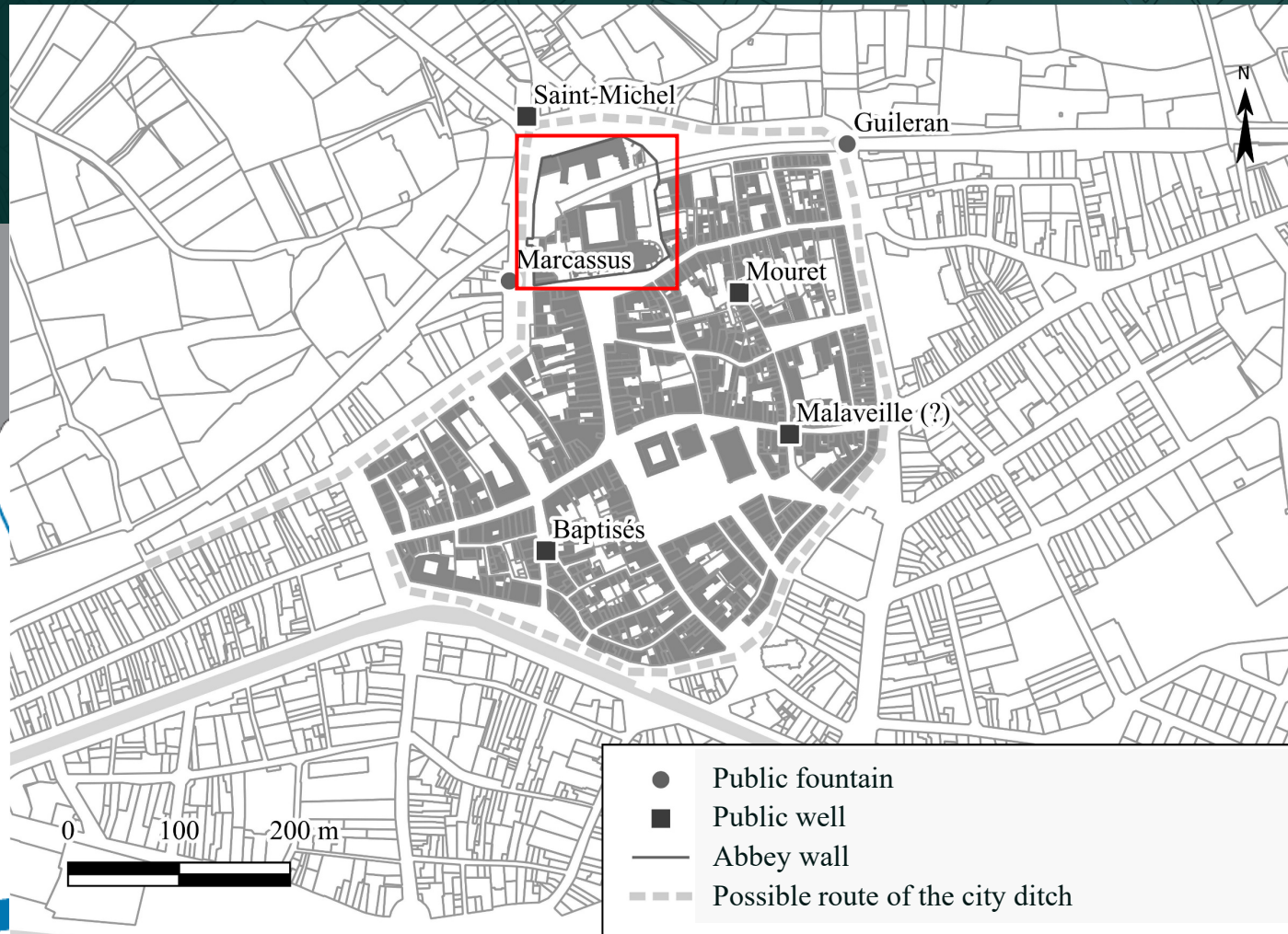
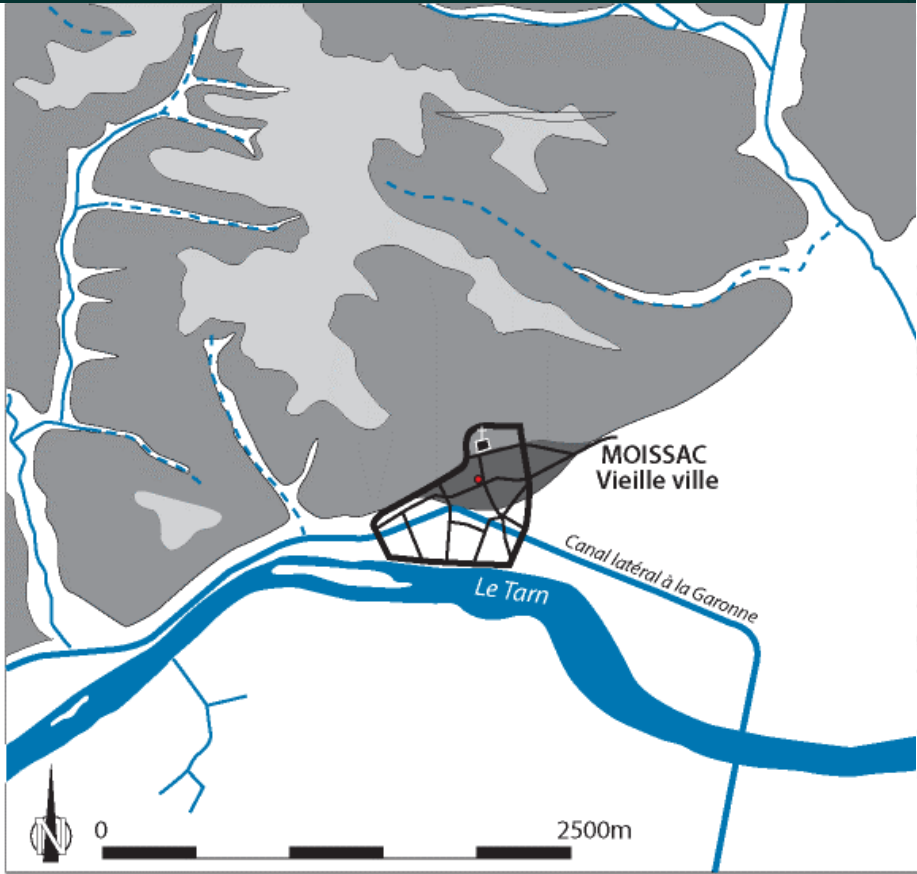


0 250 500 km



0 20 40 km





● Secteur fouillé "Moissac, 18 rue République"



Vieille ville de Moissac (d'après Beylleyme, levé 1762-1783)

Alluvions récentes :
galets, graviers et sables gris beige
(Pléistocène supérieur - Holocène)

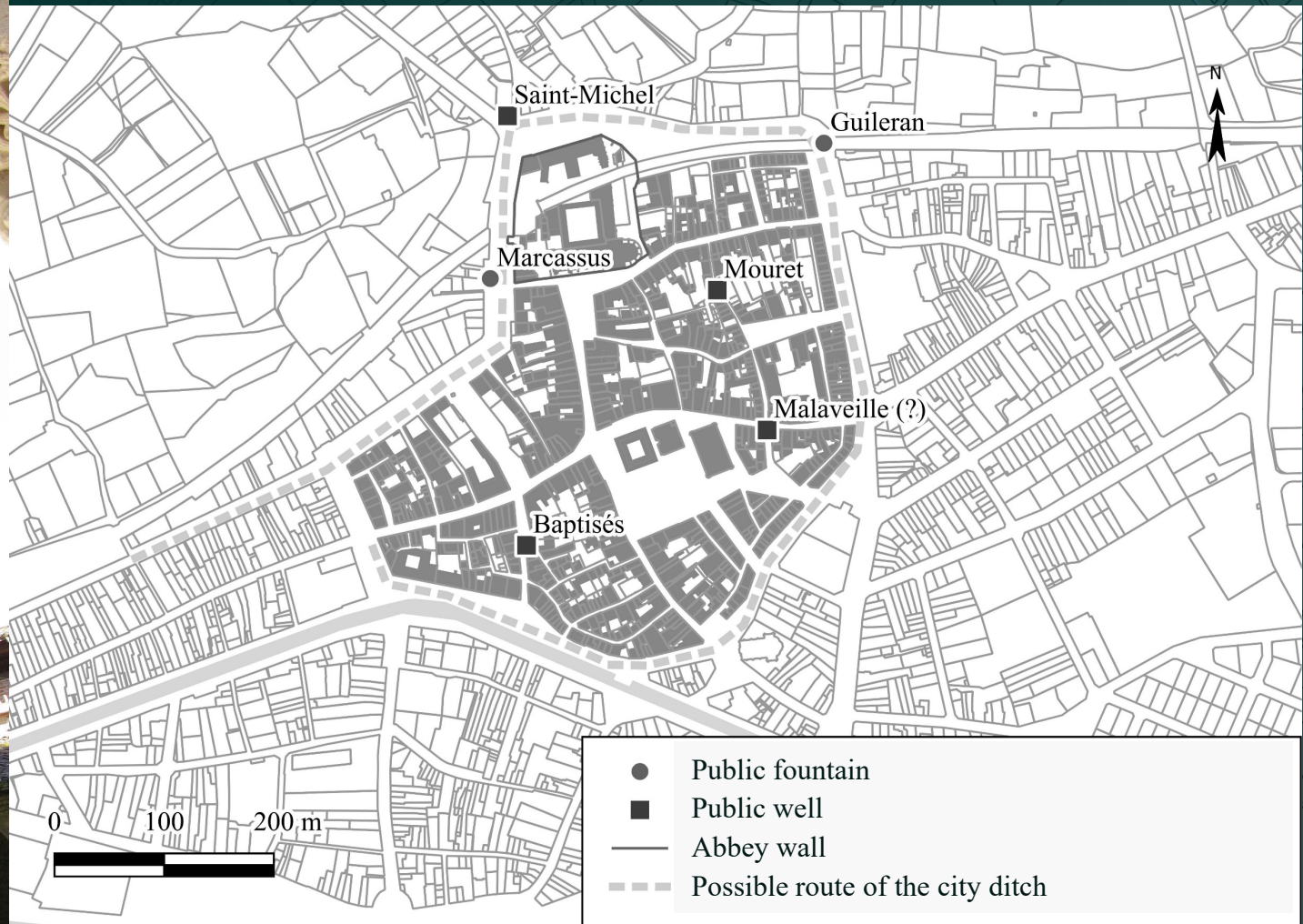
Basse terrasse alluviale :
sables, galets et graviers gris clair
(Pléistocène supérieur)

Marnes, argiles carbonatées limoneuses et grès
(Miocène)

Molasses de l'Agenais inférieures et supérieures :
grès tendres et argiles limoneuses carbonatées micacées
(Oligocène)

▲ Moissac's organisation during the
15th century

◀ Geological context



▲ Moissac's organisation during the 15th century

◀ The abbey of Moissac

**Preventive
archaeology : 18
rue de la
République**
Geomorphology
study of the
backswamp

Study the urban
management of
its water
resources

Master's thesis
Study of the water
supply and water
drinkability

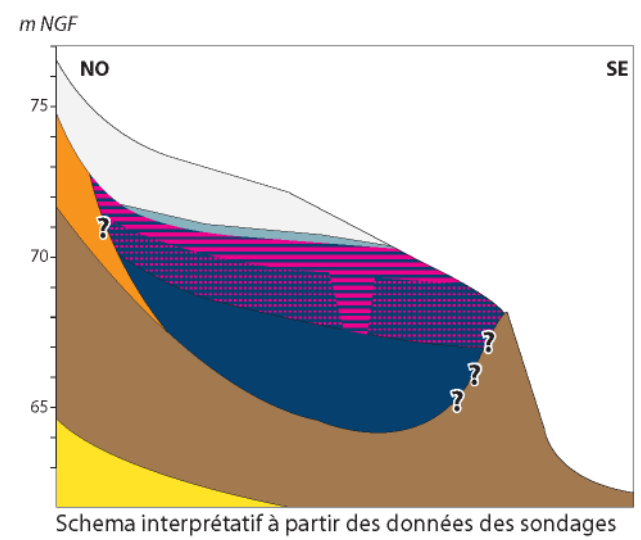
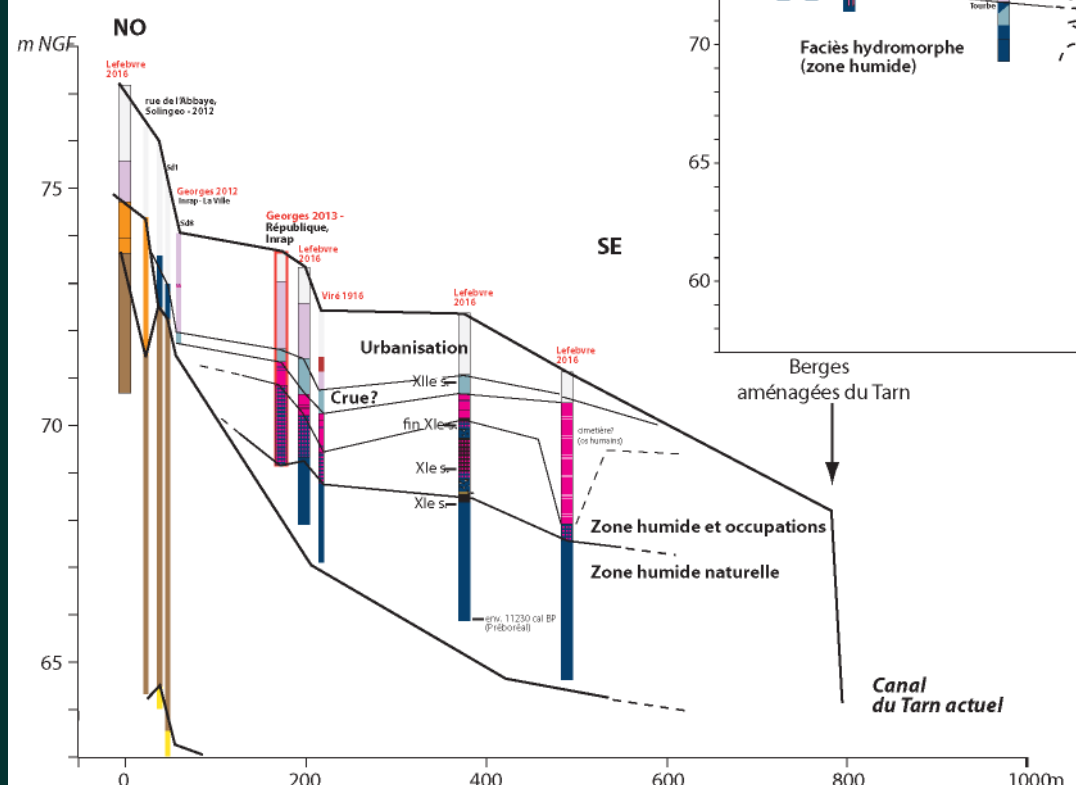
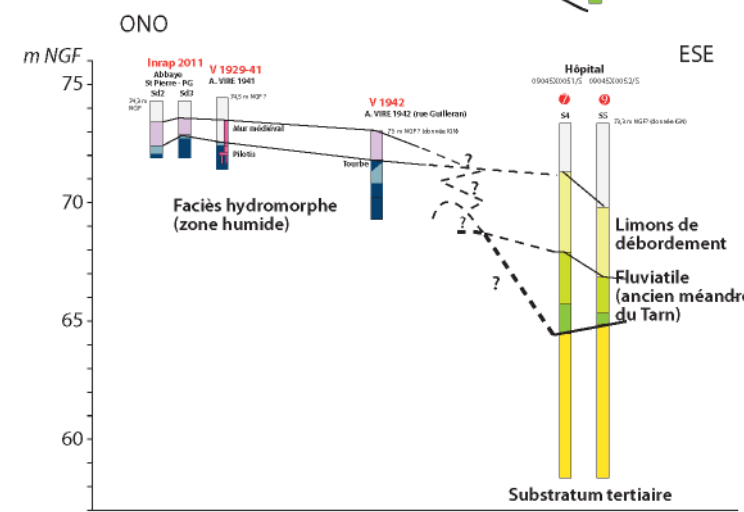
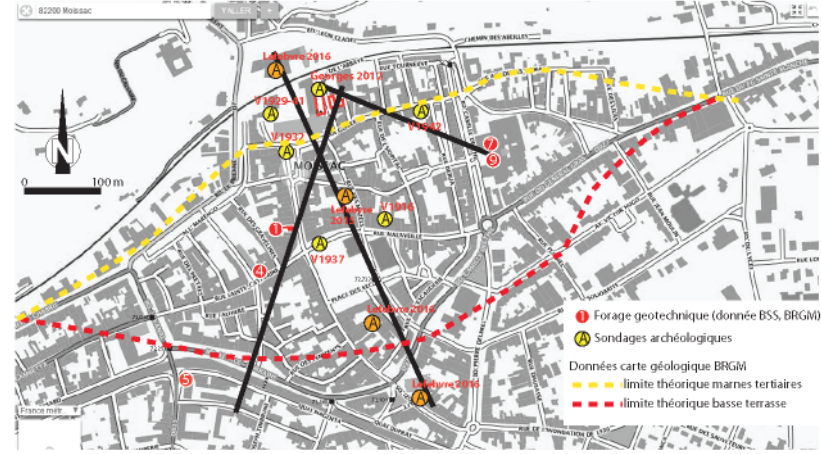
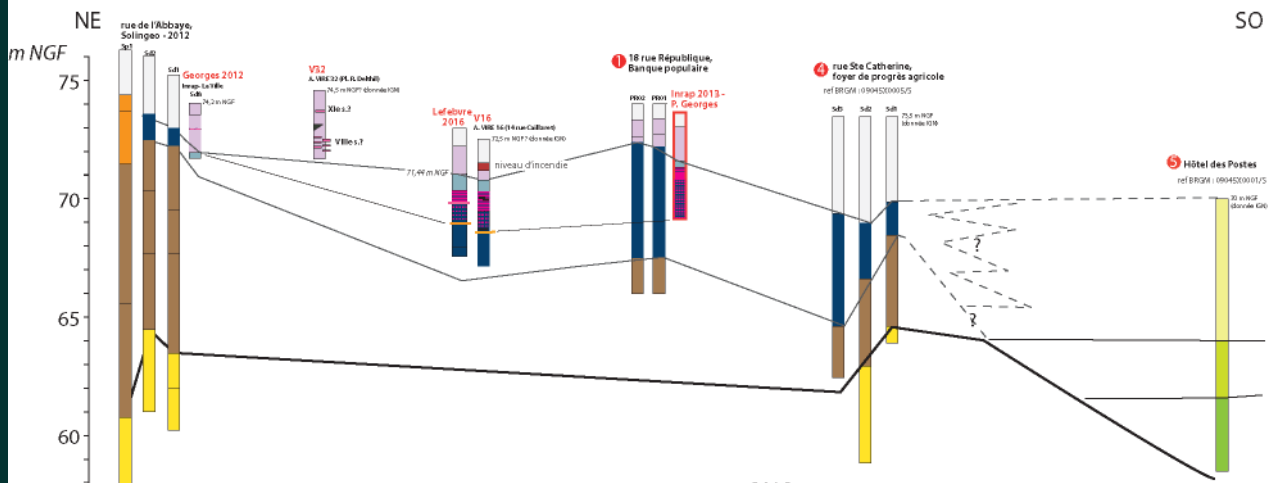
18 rue de la République

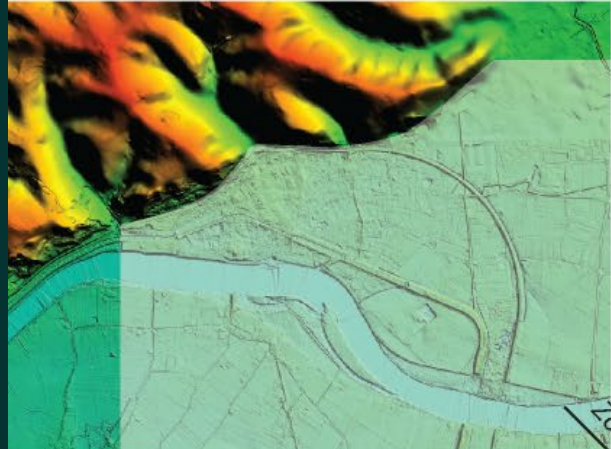


Crédits : C. Pallier (Inrap).

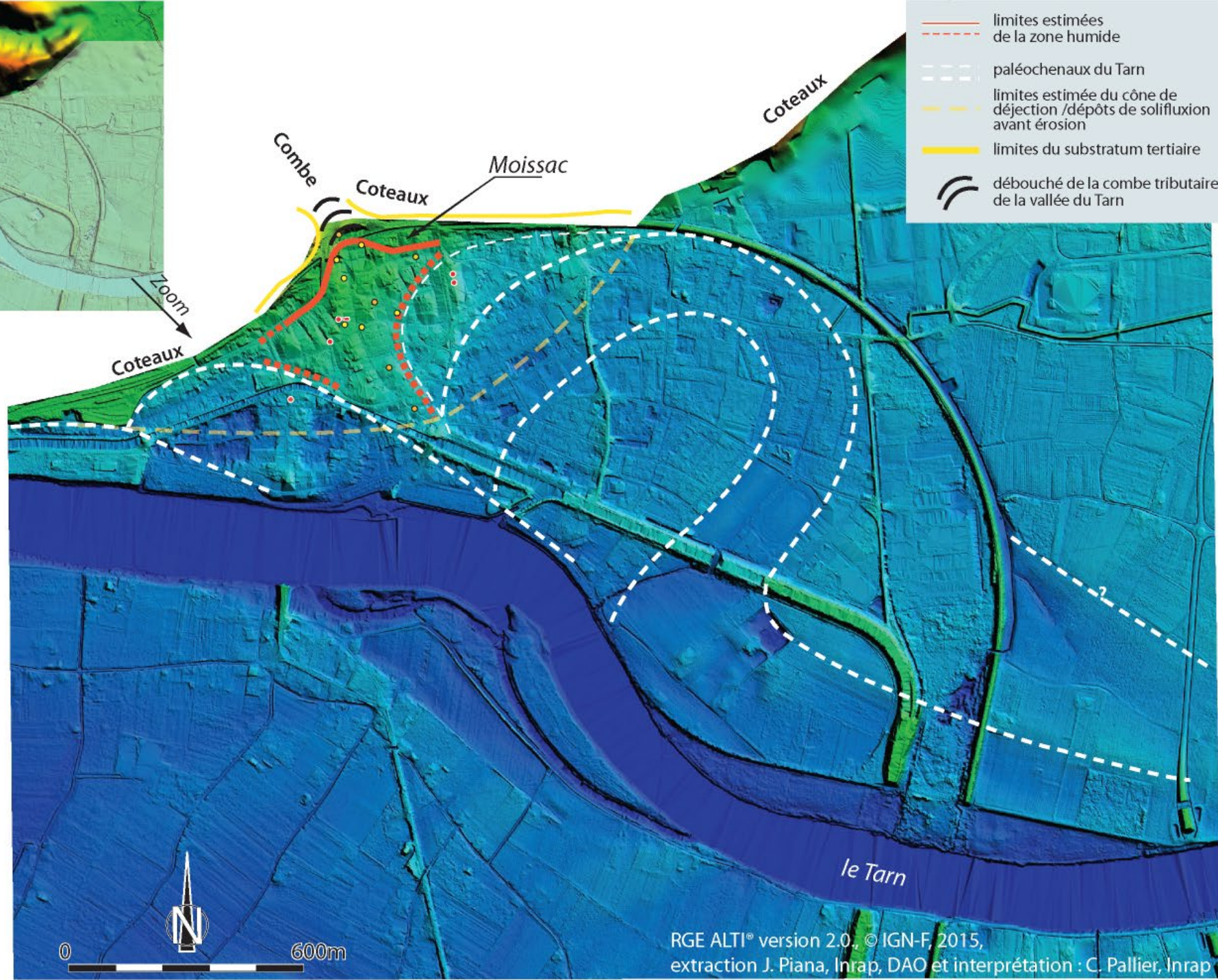
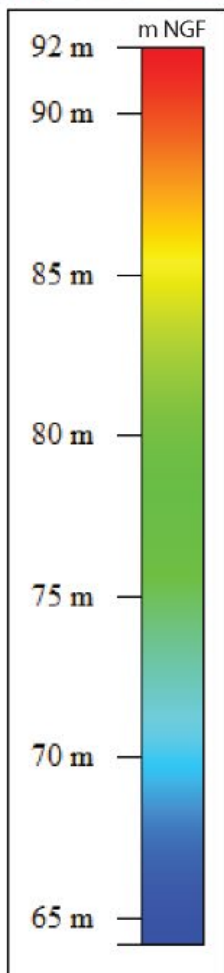


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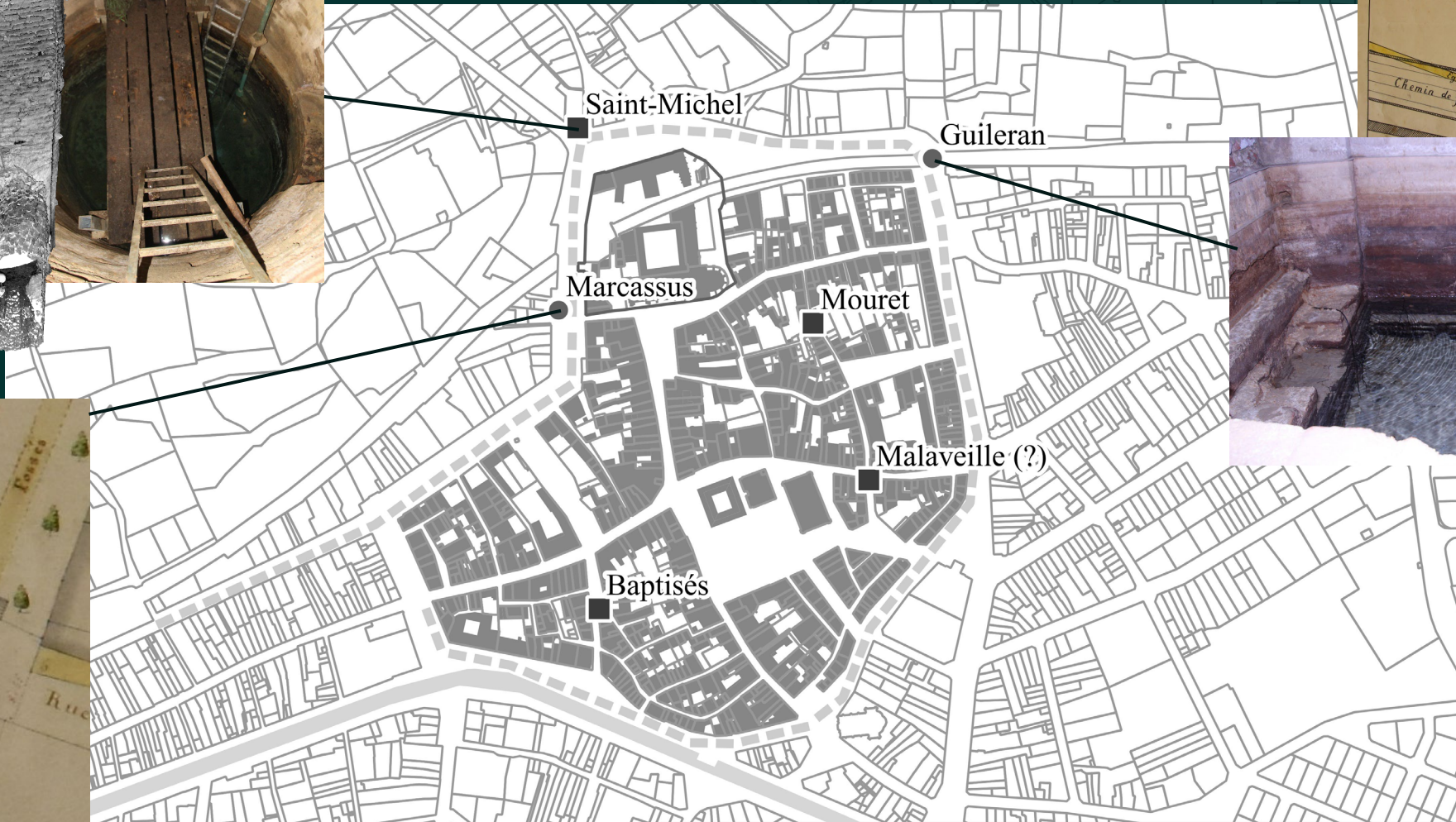
- limites estimées de la zone humide
- - - paléochenaux du Tarn
- - - limites estimée du cône de déjection / dépôts de solifluxion avant érosion
- limites du substratum tertiaire
- ⤵ débouché de la combe tribulaire de la vallée du Tarn



RGE ALTI® version 2.0., © IGN-F, 2015,
extraction J. Piana, Inrap, DAO et interprétation : C. Pallier, Inrap



Modèle 3D du puits Saint-Michel © F. Baleux,
B. Lefebvre, A. Van de Luitgaarden

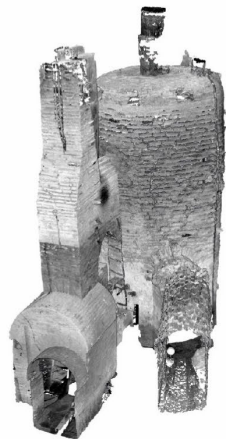
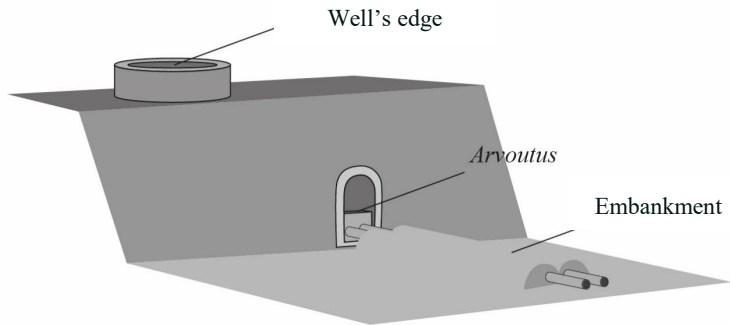


AM Moissac, 2 S VIRE 2
© A. Van de Luitgaarden



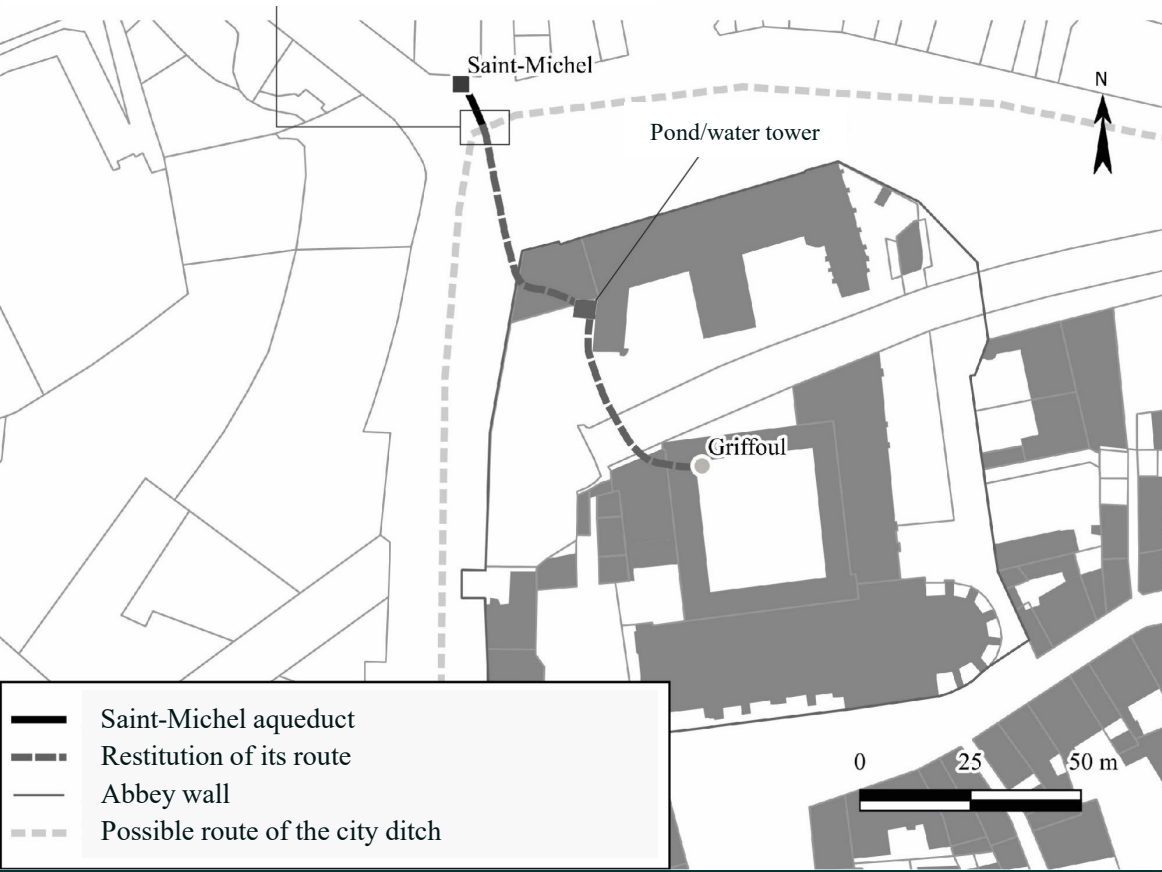
AM Moissac, 1 O2
© F. Hautefeuille



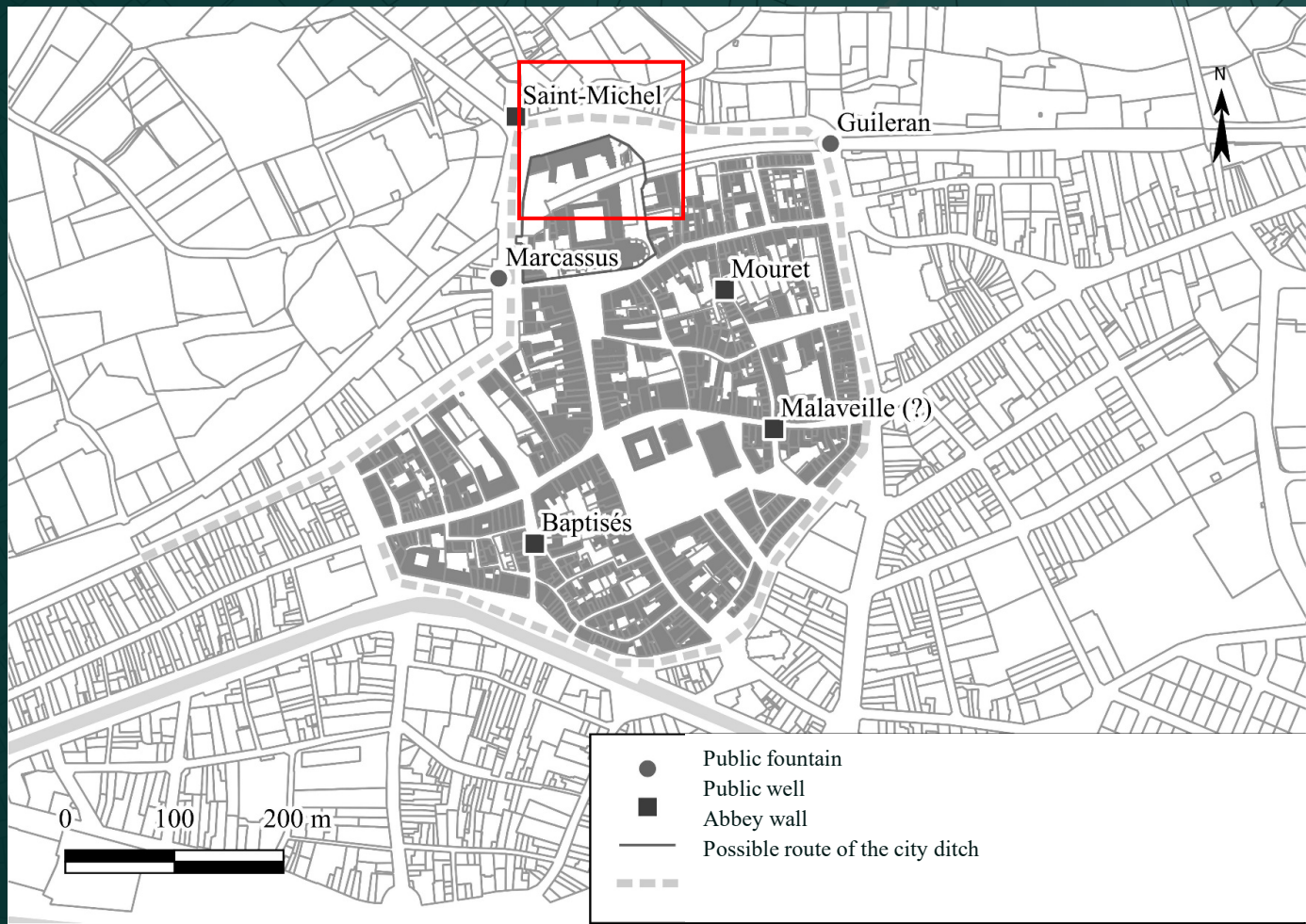


Saint-Michel well 3D model

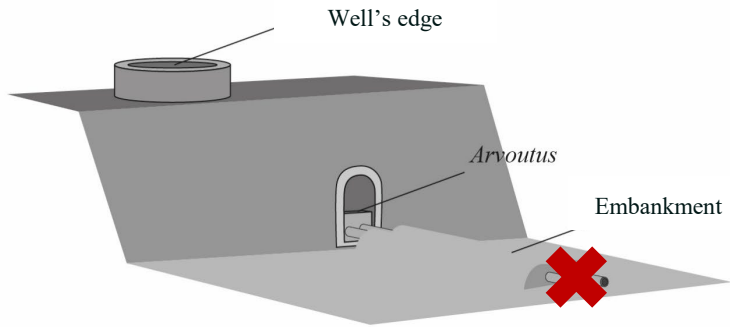
Possible restitution of the ditch's crossing by the abbey's aqueduct



- Saint-Michel aqueduct
- Restitution of its route
- Abbey wall
- Possible route of the city ditch



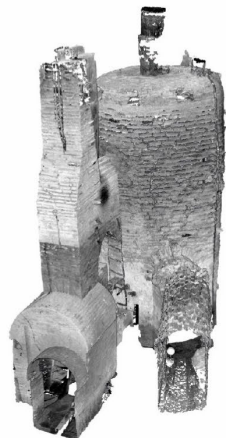
- Public fountain
- Public well
- Abbey wall
- Possible route of the city ditch



Well's edge

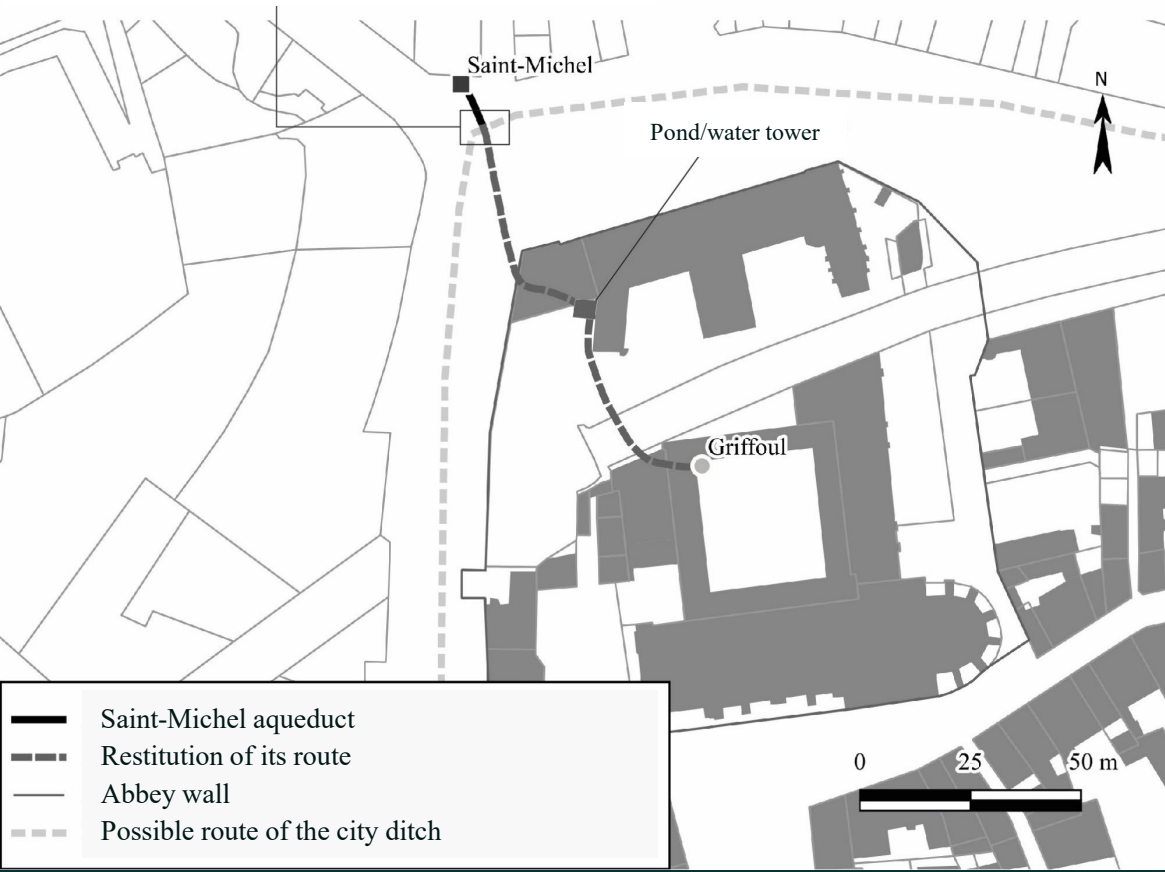
Arvoutus

Embankment

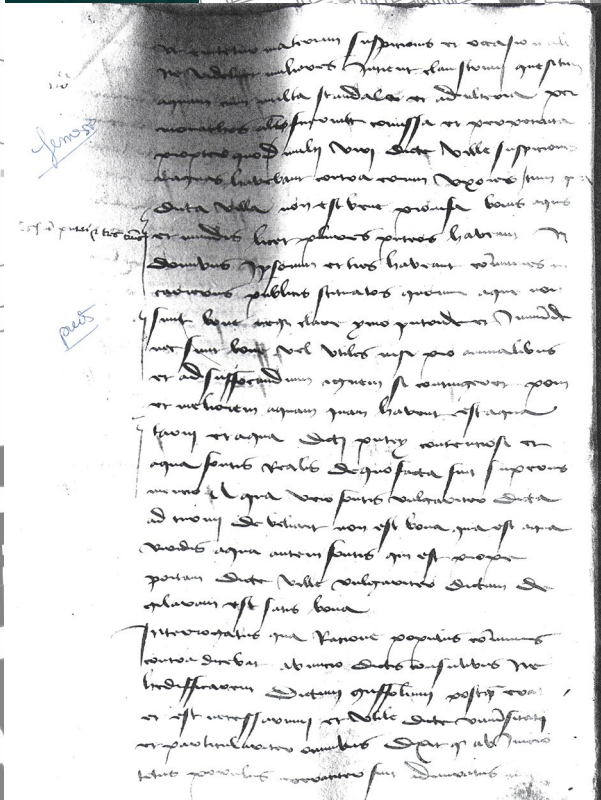


Saint-Michel well 3D model

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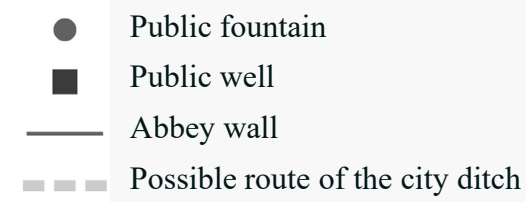
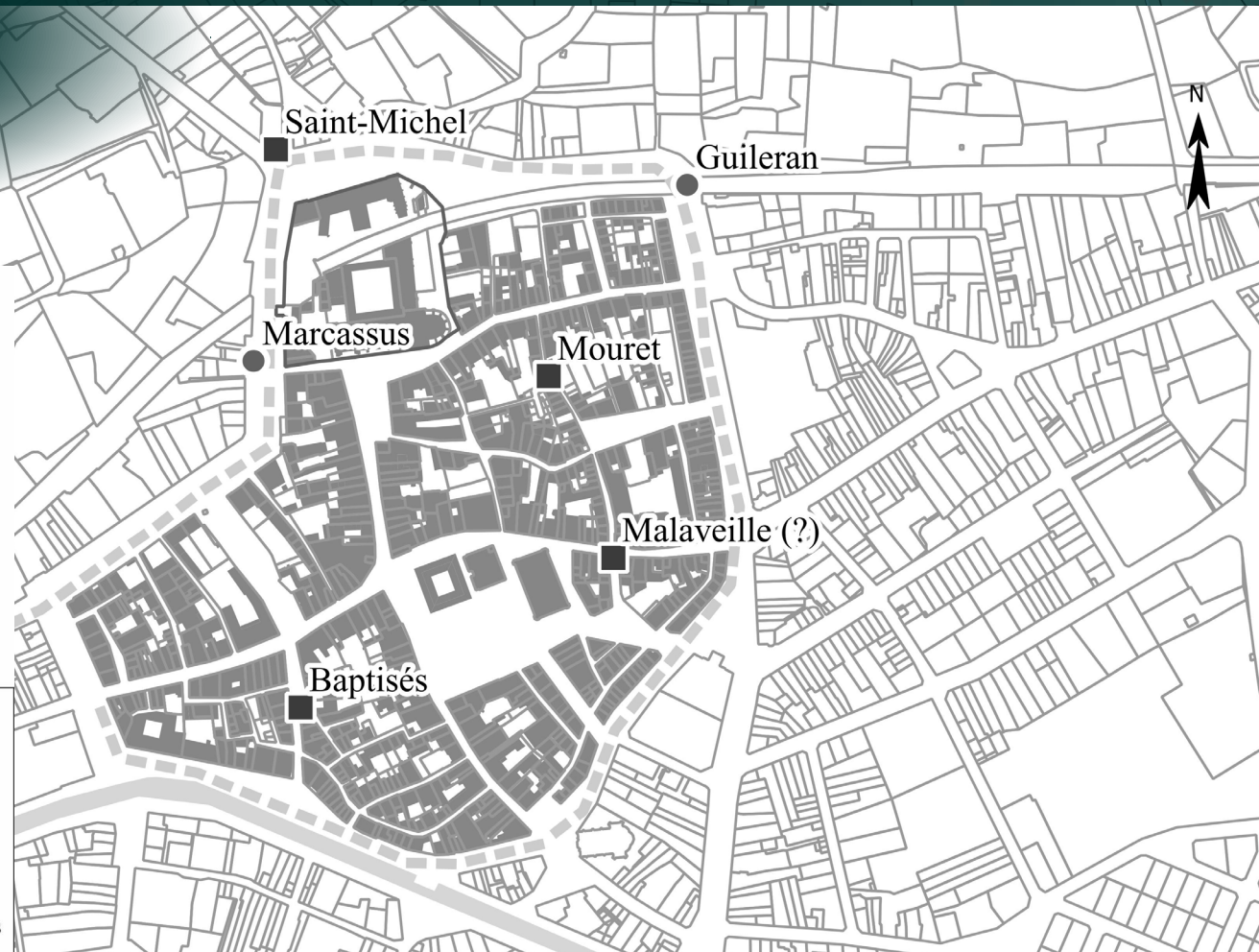
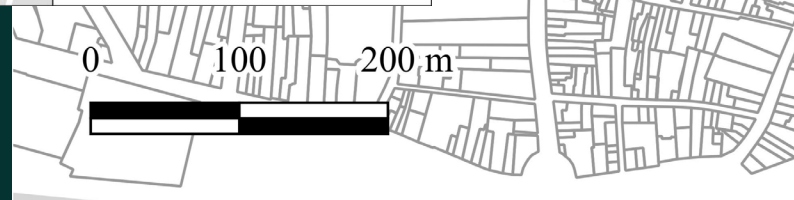
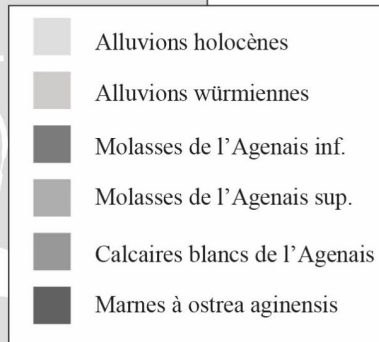
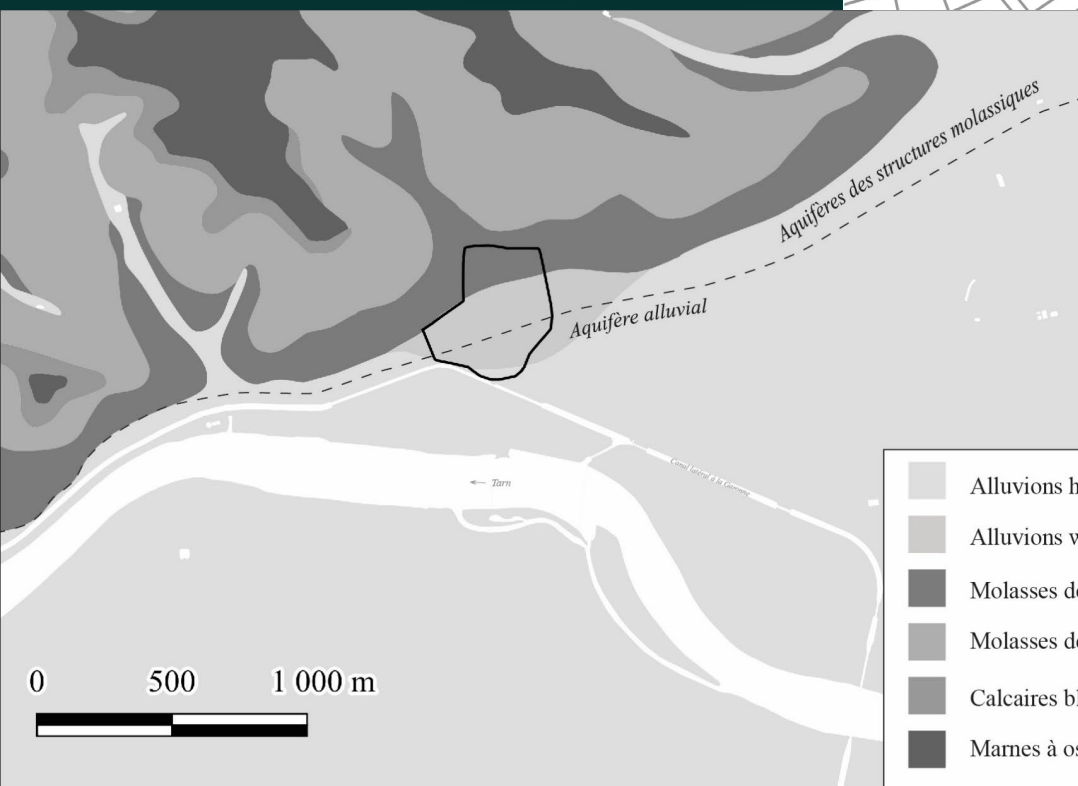


- Public fountain
- Public well
- Abbey wall
- Possible route of the city ditch

AD82, G 560, f. 23v
© C. Laflorient

« La ville n'est pas pourvue de bonne eau et propre bien qu'ils aient plusieurs puits dans leurs maisons et qu'ils en aient trois communs dans les rues publiques [...] elles ne sont bonnes que pour les animaux et pour éteindre le feu »

AD82, G 560, f. 23v (traduction de P. Foissac)



Conclusion :

- Need of drinkable water is a constant
- No information about early organisation around water supply in Moissac but hypothesis : water of the backswamp = potential source of drinkable water up to the 12th century, considering the backswamp's autopurification capacities (Ochia-Salazar 2008)
- Backswamp's disappearance (on surface) is the result of urbanisation but can't say exactly how Moissac's population managed to « clean-up » the backswamp for building accommodations
- **Urbanisation participated to the pollution of the underground water that was no longer drinkable by the 15th century**

Perspectives :

- Still working on the ramifications of the backswamp's transformations, its hydrogeological behaviour and its implications in the town water supply
- Use of historiographic sources + archaeology + geomorphology + hydrogeology
→ PhD about interaction between humans and their environment in urban contexts

