

The PC15 Building: a Wood-Built Public Place at the Center of the Oppidum of Bibracte (France)

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This synthesis proposes to analyze an original wood construction dated to the end of the Iron Age discovered in the heart of the oppidum of Bibracte (Saône-et-Loire, France). Archeological excavations in the area of platforms PC14 and PC15 offer evidence of a new earth and timber architectural complex. It covered an area of 1,900 square meters and was used for half a century, between La Tène D2 and the end of the Augustan period (70/60 B.C.E. – 15 B.C.E./5 C.E.). Four successive revisions can be described accurately: the first three phases were made of wood and earth and the last one was a composite architecture of stone and wood. The characteristics of this monumental construction indicate that it was certainly a public building with original architectural features and techniques. Yet, although this monumental building is very well documented archaeologically, its exact function remains enigmatic. While evidence is lacking for us to draw finite conclusions in that regard, this article proposes to investigate its probable function(s). This is accomplished by comparing the PC15 complex to similar structures found at other archeological sites in France, such as one from Tregueux, the public place of Thésy-Glimont, and the sanctuary of Corent.

Introduction

Bibracte, located on Mont Beuvray (Burgundy, France) was the capital of the Aedui. The oppidum was occupied from the end of the second century B.C.E. to the beginning of the 1st century B.C.E. Considered as one of the most important sites for the study of European protohistory, several areas of the site have been explored since the middle of 19th century. Suspended at the dawn of the First World War, excavations restarted in 1984 and have continued to this day thanks to the creation of a major European research program which includes many universities from all over Europe.

The first excavations in the ‘Parc aux Chevaux’ were conducted by Jacques-Gabriel Bulliot and later Joseph Dechelette at the end of the 19th century. These investigations revealed stone structures interpreted as vast platforms that were named PC14 and PC15. Bulliot focused on the stone foundations of two enclosures and some features that he regarded as cremated remains.¹

In 2012, archaeological excavations in the area resumed, led by a team from the Franche-Comté University directed by Philippe Barral, Pierre Nouvel, Matthieu Thivet and Martine Joly. The vast stripping of an approximately 7,400 m² area conducted between 2012 and 2017 has made it possible to completely clear an original architectural structure of earth and wood about 44 m wide, built before platforms PC14 and PC15. Despite a complex stratigraphy, four major successive phases are distinguishable. The first three forms were constituted of earth and timber, and the last one was built of combined earth, wood and stone materials.

This construction was significantly different from other earthen and wooden remains excavated over the rest of Bibracte and the form of the building refers in its configuration to a public space. The PC15 enclosure is currently the only representation of Celtic monumental earth and wood architecture in Bibracte, and in fact, this type of building is

poorly known within oppida. Therefore, PC 15 is one of the most emblematic structures for the study of public Celtic places.

Finally, the use of stone during the final construction phase of this building also illustrates the spread of Mediterranean influences in the area.

In view of this exceptional discovery, a first synthesis article was published in 2016 in the proceedings of the AFEAF conference in Rennes.² The present paper aims to complete it and proposes a new synthesis based on results from the last excavation campaign conducted in 2017 and a master thesis completed that same year.³ After a summary of the data used for our interpretations, the four-phase evolution of the excavated area will be detailed. We will use the results of a spatial analysis conducted on post holes to complete this second part. Finally, a comparative analysis will conclude this article.



Fig. 1. Plan of phase 1: the double gallery building (70 B.C.E. – 50 B.C.E.)

Data and Methodology

The corpus of data used in this study comes from the six excavation campaigns conducted between 2012 and 2017. It included field documentation and studies of archaeological artifacts.

These six years of collaborative investigations have led to a significant increase of stratigraphic data available for the site. Almost 3000 stratigraphic units have been recorded. Units are linked together according to the stratigraphic observations made in the field. This stratigraphic sequence represents a key feature to understand and analyze the chronological evolution of the building. To refine the temporal framework, the stratigraphic data has been compared to artifact categories (pottery, coins).

Artifacts are represented mainly by amphorae, pottery, coins, nails, and copper alloy objects. All artifactual studies were published in the excavation reports. There were not many objects recovered within PC15 in relation to the area explored, except during the year 2017. This was due to the fact that this last excavation campaign focused on the exteriors of the building and therefore delivered numerous archaeological artifacts, mostly amphorae. However, chronological

markers like pottery or coins were not recovered which did not permit the dating of each phase.⁴ The poverty of the corpus, which is furthermore very fragmented, limits the chronological, spatial and functional analysis in this study. As a result, this article will only focus on the evolution highlighted by the stratigraphic data.

The excavations conducted have uncovered many structures and allowed researchers to sketch building plans, completed during the different campaigns. The features uncovered are very diverse (post holes, pits, palisade trenches) and carry information, particularly about the architecture of the building itself, such as depths, fills, etc. To better understand and clarify the building's form, a detailed spatial analysis was carried out. All data from the field has been incorporated in a GIS model specific to PC15. The use of GIS allowed for the creation of maps from particular requests. To illustrate the usefulness of using GIS software in such a context, a spatial analysis conducted on the depth of postholes is briefly presented in this article.

Evolution of the Structures

Phase 1 (~ 70 B.C.E.)

The first phase of construction in the area was the installation of an initial layer of

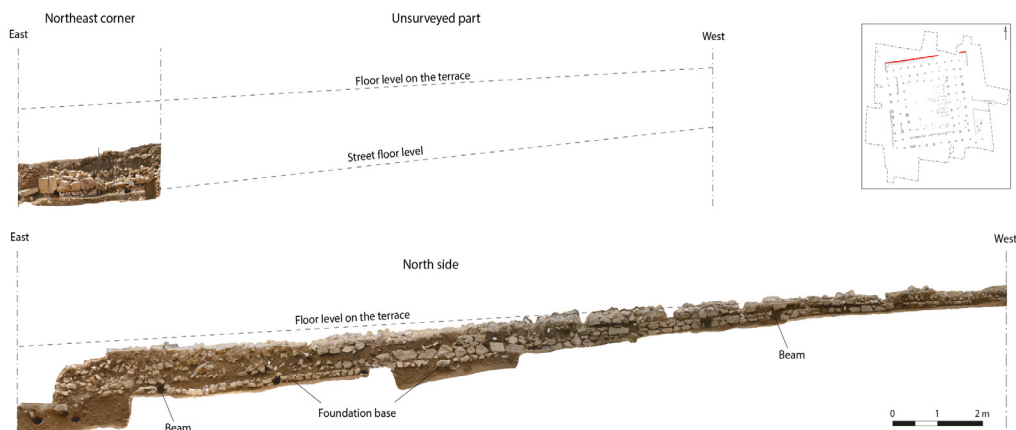


Fig. 2. Remains on the north side of the murus gallicus (Photogrammetry: D. Vurpillot)

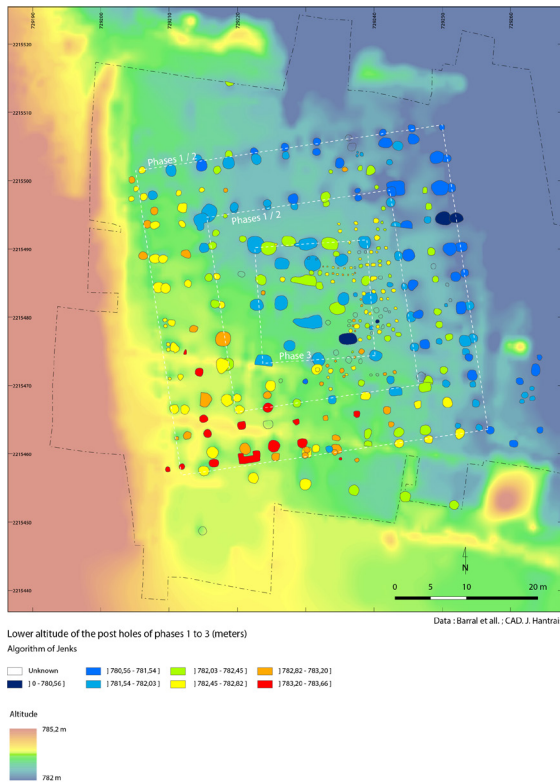


Fig. 3. Depth of post holes in phases 1 to 3.

dirt to create a terrace. It is delimited by a unique wall system using the *murus gallicus* technique, the same one that was typically used for ramparts like the ones of Bibracte. It has been identified on at least three sides (north, east and west) (Fig. 1, Fig. 2). Its northern face is one of the best preserved. The wooden frame, which is one of the characteristics of this type of construction, has been clearly identified. Layers of beams were placed horizontally, perpendicular to the stone facing. The wooden pieces used were between 20 and 25 cm long, and spaced one meter apart. They were fixed together with 20 cm long iron nails. In addition, two layers of beams were separated by a sill that can be deduced from a thin layer of silt in the stone covering. The east side consisted of two sections that joined to create a large entrance. This was the only access route revealed by archaeological excavations for the first phase

of construction.

On this terrace, delimited by this *murus gallicus*, a first edifice with 44 m-long sides was built (Fig. 1). It included two galleries of wooden posts, each one being almost 45 cm wide. Both galleries were 4.40 m wide, forming a main gallery of 8.80 m. The post holes in the northeastern corner of these galleries were deeper than the ones opposing them in the southwestern corner, where the slope is the least pronounced (Fig. 3). This analysis shows that the constructions followed a predefined plan, but that the architects faced topographical constraints and adapted the structure to them, as is demonstrated by the increased depth of the postholes towards the slope to the northeast corner.

The inner side of the structure opened onto a central area of 680 m². In this space, excavations revealed many small postholes but no clear plan could be distinguished, in spite of some of them being aligned. Most of them are very shallow holes. All circulation layers were covered with a well-maintained floor. The building was surrounded by walkways that continued to be used during the subsequent three phases.

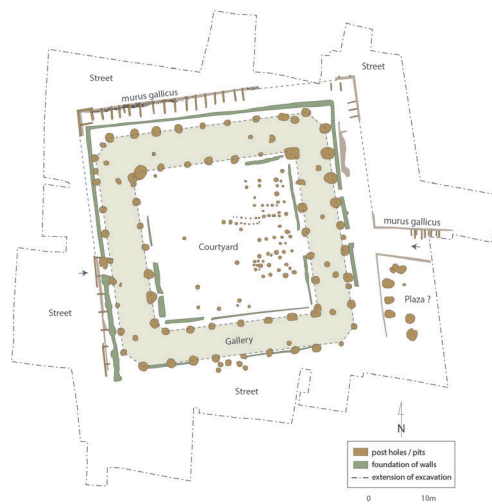


Fig. 4. Plan of the phase 2: the simple gallery building (50 B.C.E. – 30 B.C.E.)

Phase 2 (~ 50 B.C.E.)

A new building with almost the same general form as the first complex arose around 50 B.C.E (Fig. 4). It rested on the same terrace supported by the original *murus gallicus*. The main gallery of the quadriporticus was narrower than the previous one, yet, its postholes were not deeper. As was the case during the first phase, the post holes at the northwest corner were found to be deeper than the opposite ones. Moreover, the postholes constituting the central aisles during the first phase were the only ones systematically shallower than the holes used for supporting posts. This indicates a support function for the overall structure. The building was also enclosed from the outside by a trench. The excavated fill contained yellow clay blocks, which could have resulted from the crumbling of an earth wall. Within the central courtyard, small trenches can be distinguished along the line of postholes. They are currently interpreted as evidence of rainwater leaking from the roof.

Outside, several pits and postholes were found in the southeast circulation area of the building. The post negatives could be excavated finely and showed wooden pieces of 0.40 by 0.50 m. However, no overall building plan is discernible. Large pits were excavated in this space, which yielded numerous artefacts. These outside features were likely trash pits employed when the building was in use.

Phase 3 (~ 30 B.C.E.)

The third phase was characterized by a deep change in the general organization of the complex. The gallery from the previous phases was replaced by a monumental construction encircled by a peripheral palisade (Fig. 5). This stage was also marked by the levelling of the *murus gallicus*, the remains of which were embedded in a backfill employed to reshape the platform. A thick layer of backfill used to cover the access ramp was formed by the two sections

of the *murus gallicus* to the east. This layer was composed of nearly complete amphorae that helped drain and elevate this part.

The central plan of the building draws a rectangle of 16.5 x 15.2 m and was built on large posts that were sunk into deep holes. The thorough excavation of their fill made it possible to observe the presence of pieces of wood that had decayed. The depth of the postholes was generally homogeneous, with some slightly shallower than the others (Fig. 3). The poles set in these postholes do not appear to have been part of the general structure of the building. It is possible that they instead contributed to the architecture of another building, perhaps an early iteration of the PC15 terrace visible during the next phase. No stratigraphic link confirmed the presence of this structure during the fourth phase, therefore the postholes were assigned to phase three. A trench about 30 cm wide and 40 cm deep forming a square delimited the central area within which this monumental building was constructed. Traces of the wooden palisade were still visible in the backfill of some meticulously excavated sections.

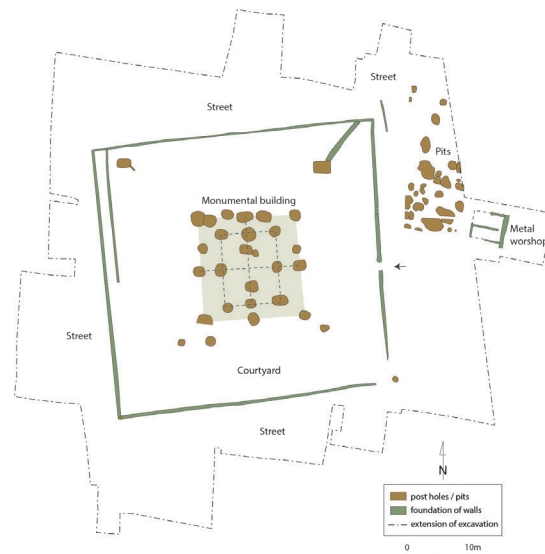


Fig. 5. Plan of the phase 3: the monumental building in the center of a courtyard (30 B.C.E. – 15 B.C.E.)

To the east, just next to the building, remnants of a metal workshop testify to a craft activity that can be associated with the needs and use of the complex. Samples and waste remains recovered showed that ironworking was practiced there. Stratigraphic data revealed that this workshop emerged after phases 1 and 2 and was therefore potentially related to the changes that arose during phase 3.

Phase 4-5 (~ 15 B.C.E.)

During these two phases, the previous building was quickly levelled to make a new terrace on which two vast platforms were built, labelled PC14 and PC15 (Fig. 6). The stratigraphic data allowed us to observe two successive construction stages (PC15 and PC14), probably very close in time, participating in an overall restructuring program visible in this area of the oppidum. This change resulted in the implementation of a new walkway system that surrounded both platforms. It is also during this phase that stone architecture appeared as a construction material used for this complex.

The new PC15 platform was surrounded by stone walls, for which only the foundations were found. The south and west sides were about 0.50 m wide while the foundations of the north and east walls were much more massive, with a width of 1.30 m. The thicker sides were likely meant to contain a significant layer of dirt present in the south-western corner where the slope is the most important. Pilasters were positioned along the wall to adorn the stone façade (Fig. 7).

The entrances of PC15 were located in the same area as the entrances of the previous earth and wood buildings. In the eastern part, a new stone ramp was built in place of the murus gallicus present in phases 1 and 2. The western entrance was materialized on the one hand by the interruption of the western wall, and on the other hand by a series of post holes that could have been supports for a portico.

In the center, the esplanade was occupied by inside installations the nature of which is



Fig. 6. Plan of the phases 4-5: PC15 and PC14 (15 B.C.E. – 5 C.E.)

still difficult to determine. The foundations of a small wall, visible at the heart of this esplanade, took the form of a “U” and seems to have been linked to a line of parallel poles that could have supported an adjacent gallery. A few postholes may indicate the presence of a central building, but no precise plan has been found.

The metallurgical workshop continued to be used during this period but was modified several times. The stratigraphy indicates that the last phase of development of this workshop corresponded to the construction of the PC15 platform. However, it is possible that this small workshop building was remodeled several times during phase 3.

The PC 14 platform was built very soon after PC15. This new terrace, also delimited by walls, had a peripheral gallery system, clearly visible on the northern side of the enclosure (the rest has yet to be excavated). The posts forming this gallery were set in large holes that were regularly spaced. Together with the wall, this formed a covered space 6 m wide.

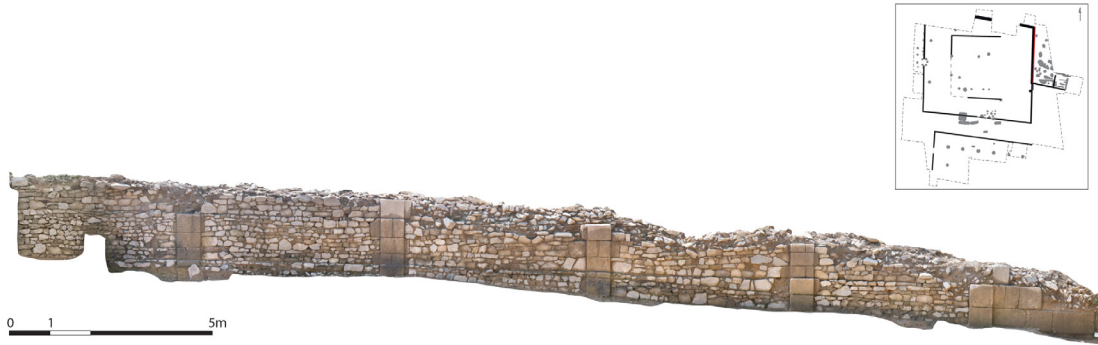


Fig. 7. Remains of the east wall of PC15 (Photogrammetry: D. Vurpillot)

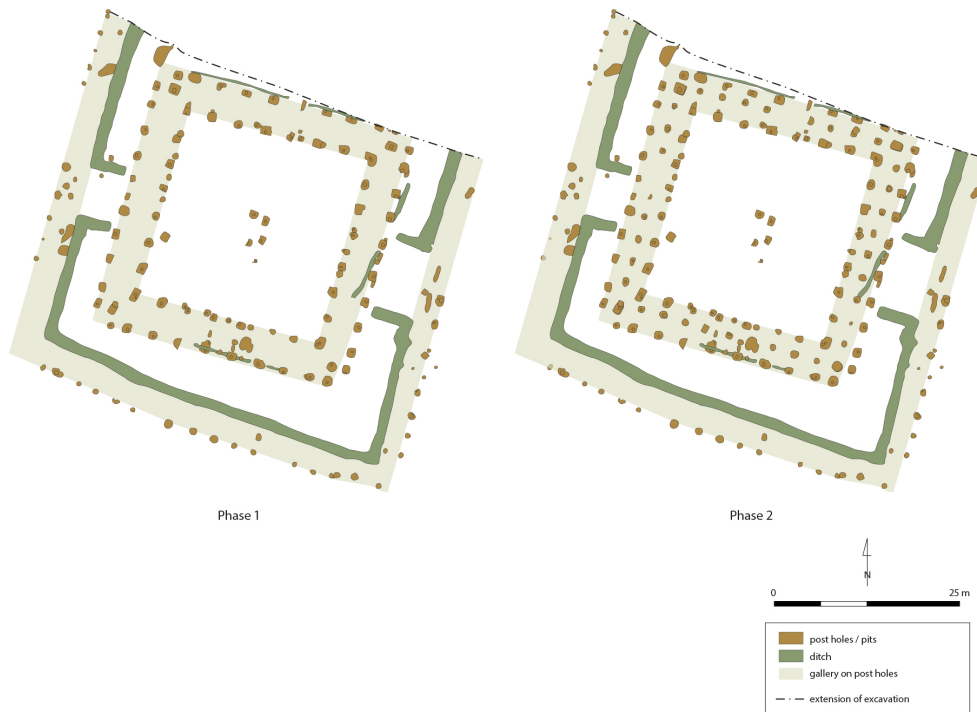


Fig. 8. Plan of the Trégueux building (phases 1 and 2) (after Allen et al. 2012).

The two platforms were quickly abandoned at the same time, marking the end of occupation of this complex. In fact, several layers of abandonment dating from the same period have been excavated throughout the area.

Comparative Study

As will be argued here, there exist a few examples of buildings that are similar to PC 15.

One of the most prominent similar examples can be found within the site of Tréguieux in western France. This site contains a square building with sides each measuring 50 m long (Fig. 8). A large ditch enclosed a courtyard in which a series of wooden posts supported a quadrangular gallery. Two 10 m wide entrances have been identified on the eastern and western sides. The spatial organization and the architectural features of this structure are similar to those visible during the first two phases of the PC15 ensemble. The Tréguieux complex is currently interpreted as a commercial place, similar to the Roman *macella*.⁵ This vast set of structures was part of an agglomeration that included, among other buildings, an elite residence.

Our second point of comparison comes from the sanctuary of Corent (Puy-de-Dôme, France) which is one of the best documented sanctuary found in the context of an *oppidum*.⁶ At the end of the second century B.C.E., this wood and earth building was equipped with a monumental gallery of posts lined by a large perimeter ditch. Inside its courtyard, two small enclosures were used for religious practices (Fig. 9). The large entrance, visible on the eastern part of the ditch, was characteristic of religious buildings of this period. The quadrangular plan, the gallery and the entrance to the east were not especially different from the first phase of PC15.

The third and last similar structure was located in Thésy-Glimont (Somme, France) (Fig. 10). Archeological excavations at this site revealed a monumental building composed of



Fig. 9. Plan of the Corent sanctuary (after Poux, Demierre 2015).

a series of postholes which formed a gallery, surrounded by a quasi-quadrangular ditch.⁷ Entrances on the eastern and western sides have been documented and were similar to the ones found at Tréguieux. In spite of this building being much less rectilinear than the constructions at Bibracte, Tréguieux or Corent, several of its architectural features were very similar to the examples described previously.

Conclusion and Discussion

Although the PC15 building visibly occupied an important place within the urban organization of the oppidum of Bibracte, its specific use is still complicated to define precisely despite the quality of the archaeological evidence. The stratigraphy

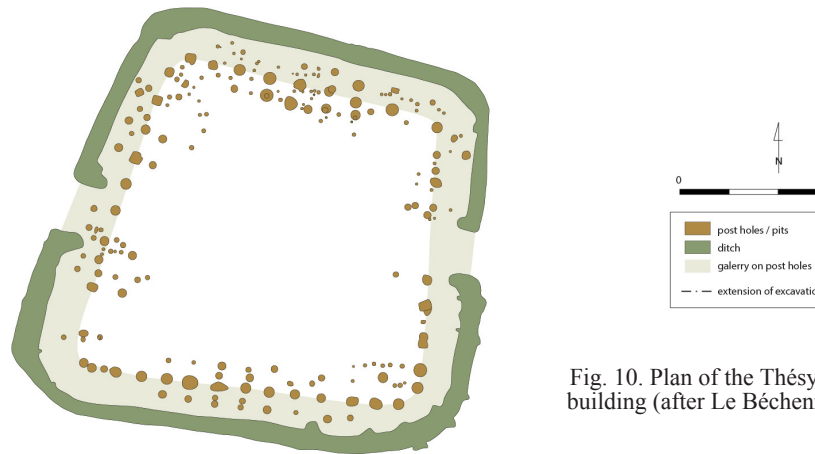


Fig. 10. Plan of the Thésy-Glimont building (after Le Béchenec 2016)

and spatial analysis of the buildings presented here revealed a complex construction sequence that illustrates the engineering power used in public architecture during this period. The construction of PC15 was an ambitious project, carried out in an area of the *oppidum* of Bibracte where topography led architects to innovate by deepening postholes and walls and constructing a *muris gallicus*. Indeed, the latter is one of the few, if not the only, example of this construction technique being used in *intra-muros* civil architecture.⁸

The few datable elements available indicate that the construction of PC15 was contemporary with another exceptional public monument excavated on the oppidum of Bibracte in the area of 'Pature du Couvent'.⁹ It is a Roman basilica which was interpreted as the oldest representation of Roman monumental stone architecture in non-Mediterranean Europe. This indicates the coexistence, within the same urban site, of models of public architecture that were very different in their design and materials used. The opposition between Celtic tradition and Mediterranean innovations fully expresses the mutations that occurred within the cities of the first century B.C.E., of which Bibracte is an emblematic example.

PC15 is part of a, so far meager, corpus of public constructions of Laténian inspiration found in an urban context. The comparative

analysis between the PC15 example and a few similar cases does not provide a single function for this type of building. Even in the event of a religious purpose emerging first, it cannot be excluded that these community buildings had several functions at the same time. In addition, most of the examples described were part of larger urban frameworks (Bibracte, Tréguieux and Corent) and were likely gathering places for their communities.

Editorial note: All figures are available in color at www.chronikajournal.com

Endnotes:

- 1 Bulliot 1899, 499.
- 2 Barral et al. 2018.
- 3 Hantrais 2017.
- 4 Allen et al. 2012; Menez 2016.
- 5 Poux and Demierre 2015.
- 6 Le Béchennec 2016.
- 7 Estur et al. (forthcoming).
- 8 Barral and Fichtl 2018.
- 9 Rieckhoff and Hoppadietz 2019; Szabo et al. 2019.

Works Cited:

Allen T., E. Biddulph, M. Dodd, M. Donnelly, B. Gourlin, and C. Poole. 2012. *Rocade d'agglomération briochine (Trégueux - Côtes-d'Armor - Bretagne). Enclos défensif, bâtiment public et habitat nucléé de La Tène 2, et leurs développements à la période gallo-romaine et à l'époque médiévale. Rapport final d'opération*. 2 vols. Oxford: Oxford Archaeology.

Barral P., and S. Fichtl S. 2018. «De Architectura Celtica : déclinaisons insolites du Murus Gallicus». In *Enclosing Space, Opening New Ground. Iron Age Studies from Scotland to Mainland Europe*, edited by T. Romankiewicz, M. Fernandez-Götz, G. Lock, and O. Buchenschutz, 19-28. Oxbow.

Barral P., M. Joly, J. Hantrais, P. Nouvel, and M. Thivet. 2018. «Un nouveau type d'architecture publique ? Le complexe monumental de PC15 à Bibracte et les enclos quadrangulaire à quadriportique de Gaule interne à la fin de l'âge du Fer». In *Architectures de l'âge du Fer en Europe occidentale et centrale. Actes du XL^e colloque international de l'AFEAF (Rennes, 4-7 mai 2016)*, edited by A. Villard-le-Tiec, Y. Menez, P. Maguer, 499-508. Rennes: Presses Universitaires de Rennes.

Bulliot J. G. 1899. *Fouilles du Mont-Beuvray (ancienne Bibracte) de 1867 à 1895*. 2 vols. Autun: Dejussieu.

Estur E., J. Dizin, A. Lachambre, J. Hantrais, and J. Soichet. Forthcoming. «La céramique des fouilles de la terrasse de PC15. Quelques nouveaux ensembles de mobilier céramique à Bibracte». *Actes du congrès d'Amiens, SFECAG 9-12 mai 2013*.

Hantrais J. 2017. «L'occupation du secteur des terrasses PC14 et PC15 à Bibracte à la fin de l'âge du Fer. Synthèse et confrontation des données chronologiques, spatiales et fonctionnelles». Mémoire de master 2, Université de Franche-Comté, sous la direction de Philippe Barral.

Le Béchennec, Y. 2016. «Thésy-Glimont (Somme), du site au territoire». In *Évolution des sociétés gauloises du Second âge du Fer, entre mutations internes et influences externes. Actes du XXXVIII^e colloque international de l'AFEAF (Amiens, 29 mai au 1er juin 2014)*, edited by G. Blancquaert, and F. Malrain. Revue Archéologique de Picardie, 30:303-316.

Menez Y. 2016. «Entrepôts et places de marchés». In *Les premières villes de l'Ouest. Agglomérations gauloises de Bretagne et Pays de la Loire*, catalogue d'exposition Jublains. Musée archéologique départemental de Jublains, du 30 avril 2016 au 31 mars 2017, edited by S. Fichtl, E. Le Goff, A. Mathiaut-Légros and Y. Menez, 73-76. Jublains: Musée archéologique départemental de Jublains.

Poux M., and M. Demierre. 2015. *Le sanctuaire de Corent (Puy-de-Dôme, Auvergne): vestiges et rituels*. Paris: CNRS Éditions, Gallia, Supplément 62.

Rieckhoff S., and R. Hoppadietz. 2019. «L'architecture pré-romaine aux abords de la basilique de Bibracte». In *Les modèles italiens dans l'architecture des II^e et I^{er} siècles avant notre ère en Gaule et dans les régions voisines. Actes du colloque de Toulouse, 2-4 octobre 2013*, edited by V. Guichard, and M. Vaginay. Glux-en-Glenne: Bibracte, Bibracte 30.

Szabo M., L. Timar, and D. Szabo. 2019. «La basilique de Bibracte et son environnement». In *Les modèles italiens dans l'architecture des II^e et I^{er} siècles avant notre ère en Gaule et dans les régions voisines. Actes du colloque de Toulouse, 2-4 octobre 2013*, edited by V. Guichard, and M. Vaginay. Glux-en-Glenne: Bibracte, Bibracte 30.