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## Managing Archaeology in dynamic Urban Centres in Canton Vaud

Marion Liboutet

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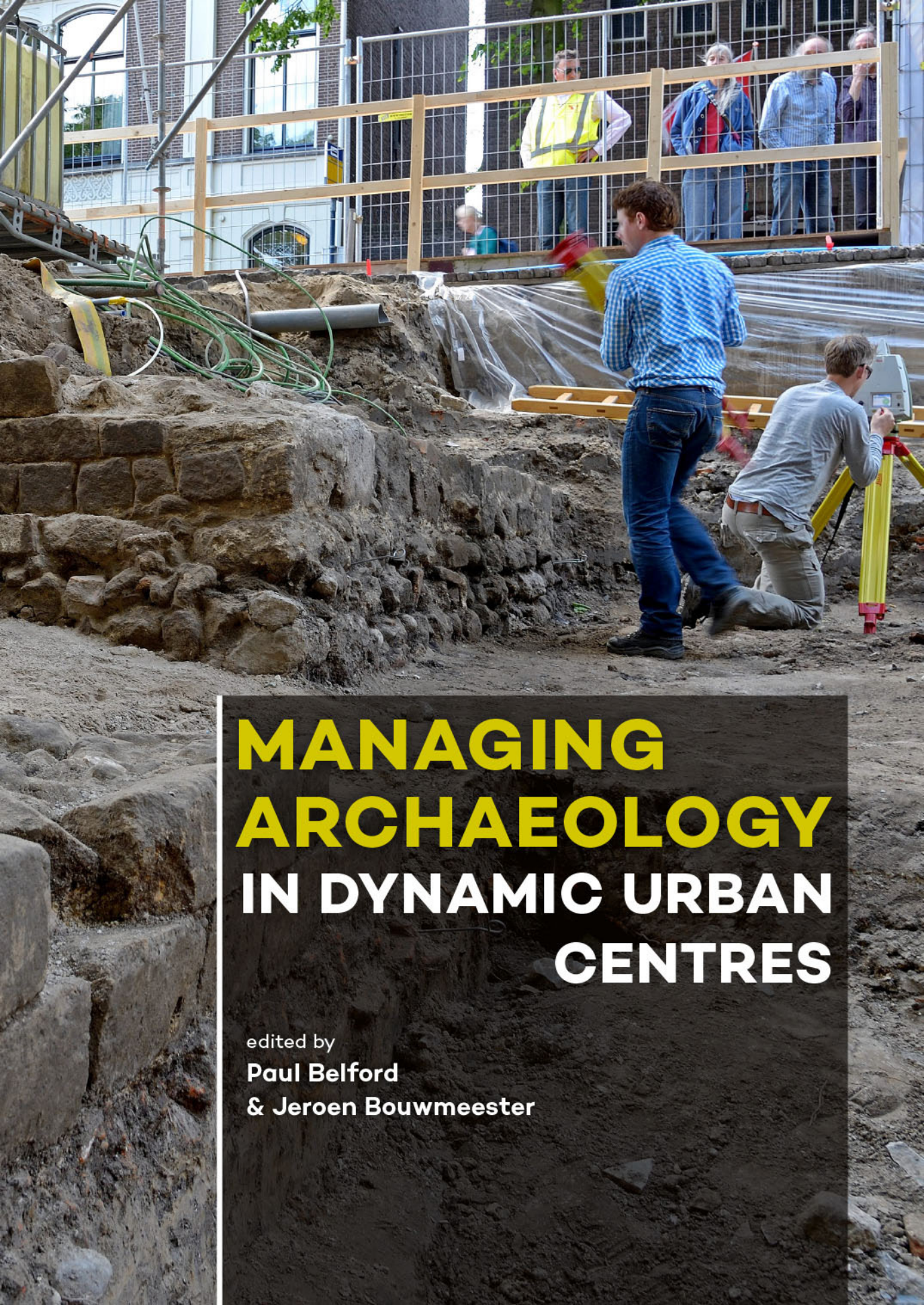
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# MANAGING ARCHAEOLOGY IN DYNAMIC URBAN CENTRES

edited by  
**Paul Belford**  
& **Jeroen Bouwmeester**



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# Managing Archaeology in Dynamic Urban Centres in Canton Vaud

Marion Liboutet

## Abstract

Canton Vaud depends on legislation made in 1969 and essentially founded in the protection perimeters of Régions archéologiques (Archaeological zones). In the case of building projects in urban areas, which threaten archaeological remains, it is generally impossible to conserve them *in situ* and in most instances they are excavated and thus destroyed. Nevertheless, their detection and especially their documentation remains a major issue. Indeed urban construction sites, particularly the replacement of urban subterranean networks, have revealed unprecedented data such as sections of fortified walls or ancient occupation sites. Surveillance of such sites is difficult to implement since this is often not considered during the planning stage of renovation projects. These sites pose real challenges for archaeologists entrusted with heritage protection. This chapter examines the procedures and processes as well as the results that were obtained.

*Keywords: Urban archaeology, management, underground service network, legislation, perimeters of protection, Medieval and Modern period.*

## 1 Introduction

Switzerland is a federal state comprising 26 cantons. It is a small territory in the centre of Europe where 75% of the population live in an urban context. French-speaking Switzerland or La Suisse Romande (23% of the land mass) contains two of the four largest cities in Switzerland: Geneva and Lausanne making this a heavily urbanised area. With population growth and sustained economic activity, the resulting pressure from construction projects in Canton Vaud is intense. Urban centres endure unprecedented change, not simply in their fabric, but also their historic buildings. Cities are also expanding, with peripheral areas being integrated into the urban network. New housing and infrastructure also has a significant impact on medium-sized towns. In city and town centres as well as neighbouring areas, archaeological remains (those identified and others as yet undetected) are seriously under threat. Issues of detection, conservation and study



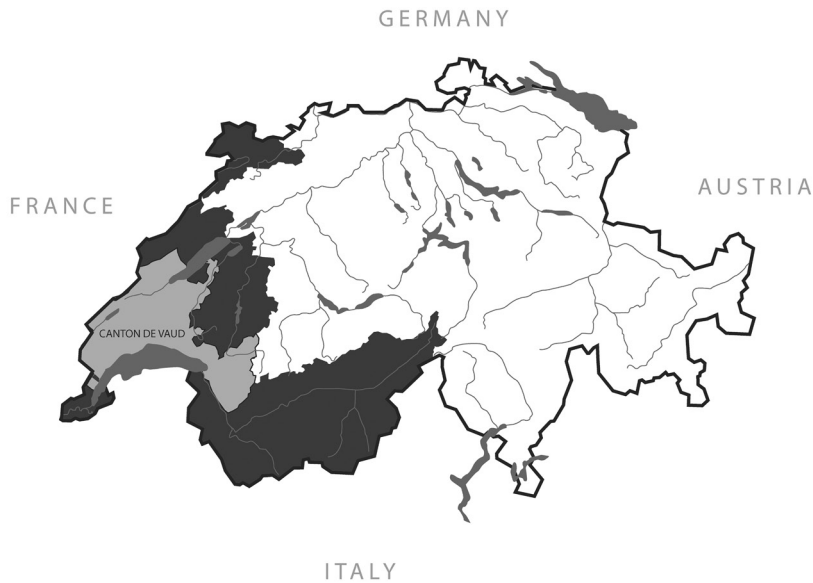


Figure 1. Map of Switzerland with Canton Vaud in light grey and the Romandie (French-speaking area) in dark colour (David Glauser).

of remains are particularly on the agenda and heavily solicit the archaeological services responsible for heritage protection. The purpose of this article is to present the tools the Canton Vaud possesses to protect archaeological remains (such as perimeters of protection and thematic studies of fortified town walls), to demonstrate the type of archaeological operations recurrent in recent years (such as the alteration of public networks and the transformation of old buildings) and the scientific results these operations were able to provide. Finally the limits of the system will be discussed, for instances where preserving remains *in situ* is impossible and destruction thus permitted.

## 2 Archaeological regulations and practice in Canton Vaud

### 2.1 Legal framework and finance in archaeology

On a national level, the *Constitution fédérale* (Federal Constitution) of the 18 July 1999, the *Loi fédérale* (Federal Law) of the 1st of July 1966 on the *Protection de la Nature et du Patrimoine* (LPN), the *Ordonnance sur la Protection de la nature et du paysage* (OPN) and the *Code civil suisse* (CCS) define the general framework and orientation regarding heritage. The 26 cantons of the Swiss Federal State have their own individual policies. Each canton therefore issues its own laws in the heritage domain. Canton Vaud relies heavily on a stock of regulations, the main principles of which were laid out in 1898 by Albert Naef, the first Archéologue cantonal (Cantonal Archaeologist). In 1969 this law was replaced by the *Loi sur la protection de la nature, des monuments et des sites* (LPNMS) and its regulations of application (RLPNMS) dated the 22nd of March 1989. The new cantonal constitution of the 14th of April 2003 fulfils and reinforces the principals stated in the LPNMS. On an international level, in 1995 the Swiss Confederation approved and endorsed the Valetta Convention of 1992, which then came into practice in 1996. Despite this, it was

never applied since no federal order ever was given which would have required cantons to translate the convention objectives into law. The convention is however respected in diverse ways specific to each canton. Most cantonal regulatory systems pre-date the Valetta Convention. Articles of law deal with the same themes as those discussed in the Valetta Treaty. They therefore, to a certain extent and according to each canton, respect the Valetta directives (Archéologie Suisse 2017, 21). The LPNMS in the Canton Vaud corresponds, in certain aspects to the directives of the Valetta Treaty. However two things are particularly lacking in the package of regulations concerning archaeology. First is the obligation to integrate archaeology into development planning; second is the legal vacuum concerning the financial aspects of archaeological work. Financing archaeology is one of the important points articulated in the Valetta Convention, which is not in the least translated into Swiss law. Article 56 of the LPNMS specifies that:

*'L'Etat peut participer financièrement aux fouilles...des antiquités classés'.<sup>1</sup>*

Even if in reality rescue archaeology rarely touches listed remains, the canton financially supports land or property owners who are responsible for salvage costs.

In Canton Vaud, the Archéologie cantonale (Cantonal Department of Archaeology) provides a recommendation in the case of planning permission. The Department of Archaeology in Canton Vaud is too small to undertake large-scale operations. Only surveillance operations covering a few days or small scale surveys can be done internally. When numerous archaeological remains are unearthed the department is obliged to hand the project over to a private excavation company. Canton Vaud has chosen a very different way of working in comparison to the Cantons of Bern and Fribourg who are equipped with archaeological services with consistent human resources, assuring the entire chain of the archaeology process.<sup>2</sup> In these cantons, the archaeological process is totally financed by the public sector (from writing the primary report, to excavation and publication). In Canton Vaud, by virtue of the principle of causality, the cost of excavation is the responsibility of the owner or construction company who, upon request, may receive a grant from the canton. In the case of work instigated by the town, archaeological work is the financial responsibility of the town or city and cantonal subsidies are never provided. Work such as street repair necessitating the replacement of underground networks, excavation funding is the responsibility of the town. Concerning the transformation of civil buildings, the owners are often private owners who are eligible for a grant. Additionally under a convention programme between the Office Fédéral de la Culture (Federal Office of Culture) and the canton, federal grants may be allocated.

## 2.2 Perimeters of protection

Article 67 of the law on the *Protection de la nature, des monuments et des sites* (Protection of Nature, Sites and Monuments) defines the protective perimeters of archaeological remains under the heading Régions archéologiques. These Régions were created based on a variety sources namely subterranean investigation, prospection and documentation. The level of knowledge of the importance and nature of the remains varies according to

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1 'The state may participate in excavation financing...of listed relics'.

2 Here we see the full scale of Swiss federalism.

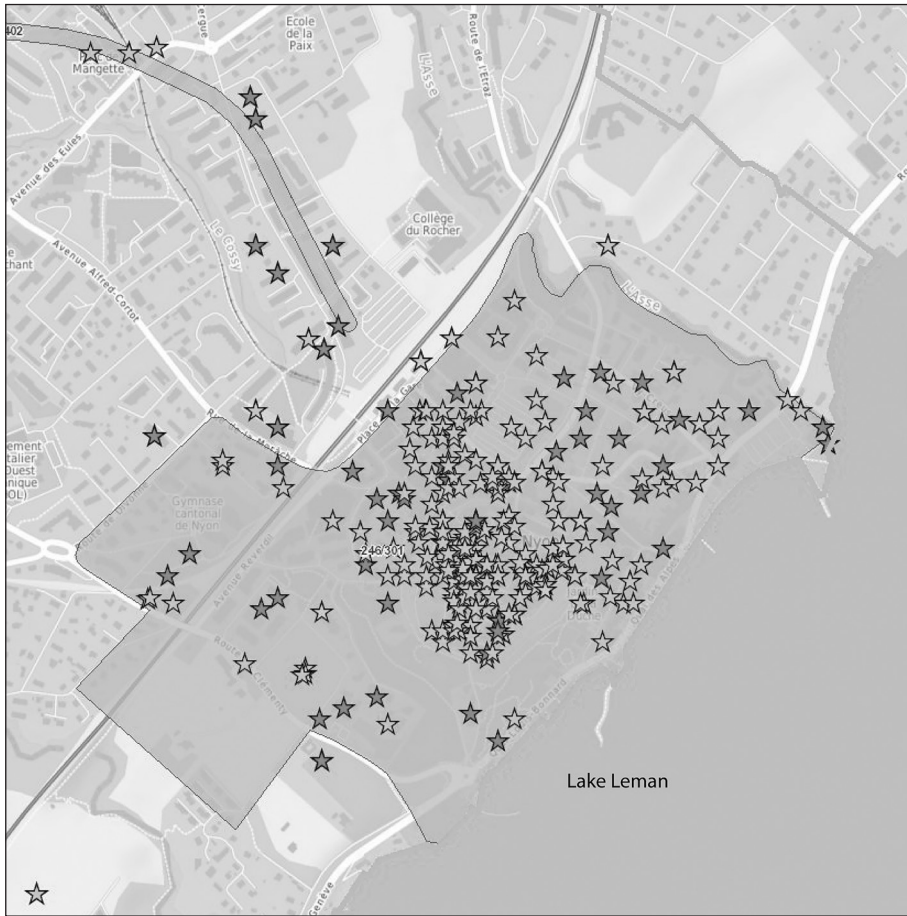


Figure 2. Nyon's Urban Centre. The stars correspond to the numerous archaeological interventions. Excerpt from the Archaeological Map of Vaud (Archéologie cantonale).

relevance and the extent to which the information is updated. The *Régions Archéologiques* are described and mapped on the Archaeological Map, a database linked to a Geographic Information System for day-to-day management or scientific research. It also records recommendations and archaeological operations (Fig.2). The creation of *Régions Archéologiques* is based on the presumption that archaeological remains exist within these areas. In urban areas it may be useful to create *Régions Archéologiques* in zones as yet untouched by construction in order assess projects which affect the remaining free spaces where there is no archaeological data. Indeed surveys which enable data collection are rare and quite inefficient in an urban setting, with existing structures in disuse or earmarked for modification. In terms of planning, the Archéologie cantonale (Cantonal Archaeology Department) tries to incorporate guidelines into land use planning dealing with large projects outside the *Régions archéologiques*. Requests are sometimes rejected due to the lack of legal framework requiring the integration of Archaeology into planning. The desire to predict archaeology is therefore limited and subject to the hazards of other state departments. Yet time and again it has been proven that these applications are valid.

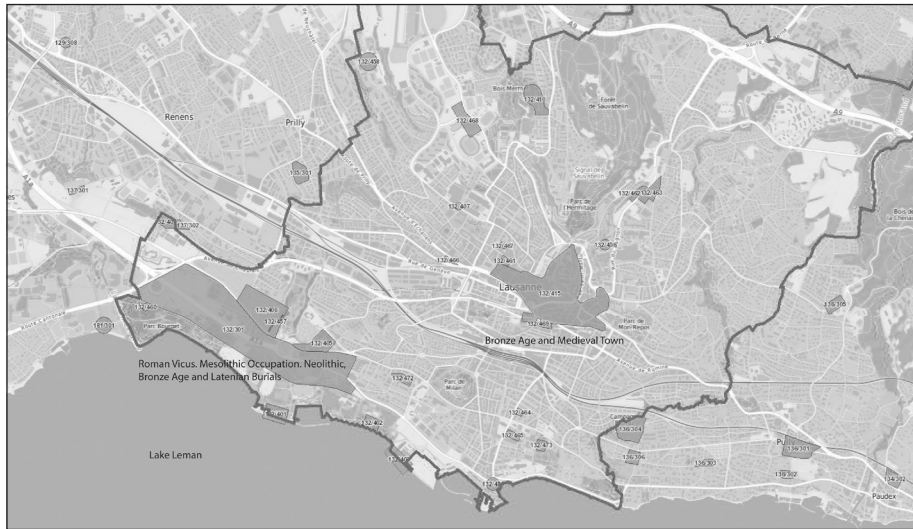


Figure 3. Principal Région archéologiques of Lausanne. Excerpt from the Carte archéologique (Archaeological Map of Vaud, Archéologie cantonale).

Surveys carried out within the confine of the development of the Tuilières district in Lausanne, outside of the Région Archéologique, were requested in the development plan and accepted *in extremis*, has resulted in the unprecedented revelation of a Bronze Age settlement. These elusive remains would not have been detected during building works and would otherwise have been wiped out by the bulldozer.

All ancient urban centres are protected by a perimeter which corresponds to a Région archéologique. These can be multiple as is the case with Lausanne, the capital of Canton Vaud, which comprises two distinct entities. One part to the north, corresponding to the medieval town and a Bronze Age settlement with the other part the Roman vicus on the banks of Lac Léman (Lake Geneva) adjoining and partially covering a Mesolithic settlement, Late Bronze Age burials, Neolithic graves and a La Tène cemetery also threatened by extensive development (Fig. 3). Other less substantial towns surrounding Lausanne are also exposed to urban development. Take Yverdon-les-Bains, the second largest agglomeration in the Canton (after Lausanne) whose Régions archéologiques (Archaeological Zones) protect post-built sites, La Tène settlements, Roman castrum and medieval town. There is the medieval town of Vevey, we have Nyon the first Roman colony in Switzerland and also a medieval town and then Payerne, a medieval town with origins in late antiquity but renowned for its Benedictine abbey. Small urban areas are also undergoing modifications which are potentially damaging to archaeological remains: the region protecting Orbe, a town founded in the Early Middle Ages, Avenches capital of the Helvétès and whose buried riches prove to be of continued importance and where real estate pressure is intense and Moudon, a probable Helvetic oppidum, Roman castrum and walled medieval town.

### 2.3 Courses of action

The *Archéologie cantonale* receives applications for planning permission for projects within the Région archéologique (Archaeological Zone). Article 47 of the LPNMS stipulates that

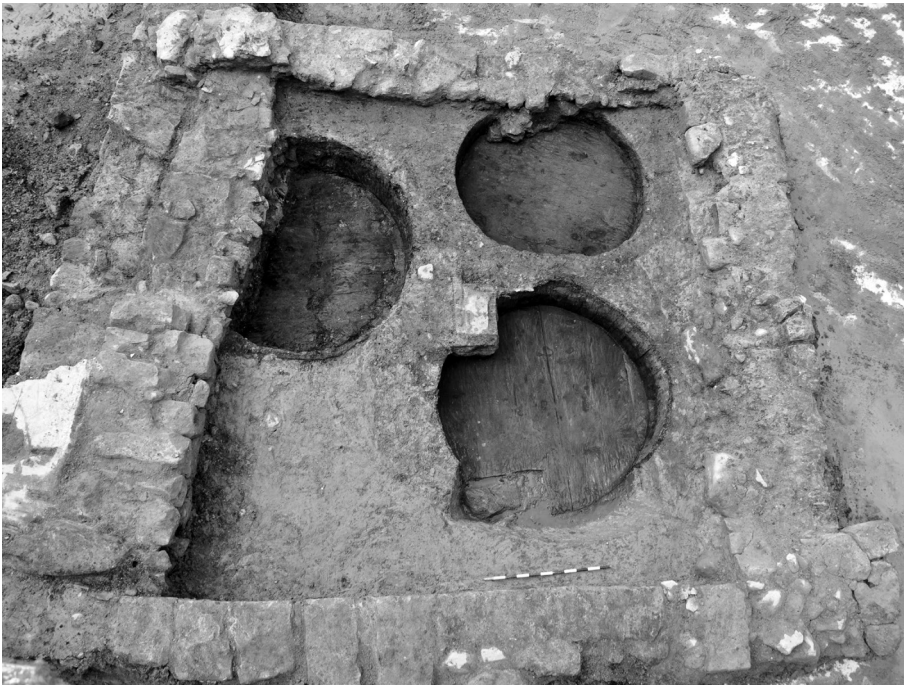


Figure 4. Lausanne. Rôtillon district. Excavation 2011. Spruce tannery barrels (Archeodunum SA).

the department in charge of heritage specifies the provisional measures for its safeguard. These measures form part of the social authorisation which is one of the conditions for the issue of a construction permit. This may take the form of surveillance, surveys or archaeological excavation if the site is already known. Evaluation of urban projects use information contained in the Archaeological map (based on previous excavations) as a yardstick and also reference documentation. For historic towns a publication regarding the boundary walls of certain towns in the canton is used as a basis to evaluate the impact of development projects on this type of remains and helps to make decisions (Christe 1999, 301-318). Compound plans based on the old cadastre, created by the Histographic Museum of Lausanne in the first few decades of the twentieth century, also support the process. When potential development threatens archaeological remains, a field operation is set up.

In towns, with the exception of large plots of land on the outskirts, vacant plots are rare and it is mostly the (quite rare) transformation of districts which have resulted in large scale excavation. The Rôtillon district of Lausanne (Fig. 4) was entirely redesigned between 1996 and 2011 (Freudiger 2012) and led to the excavation of the medieval and modern tanneries district along the River Flon.<sup>3</sup> In Payerne, a plot barely altered until recently revealed a nucleus of medieval habitation which included lightweight house structures and a medieval store (Maroelli 2016). In Lausanne, the landfill of the train line Lausanne-Echallens-Bercher caused the excavation of a nineteenth century cemetery which was

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3 Excavation François Christe, BAMU-1996, Olivier Feihl, Archeotech SA-2004-2005 and Sébastien Freudiger, Archeodunum SA-2011.

known from the sources but which was thought to have been completely destroyed by recent urban construction.<sup>4</sup> Such extensive excavations of whole neighbourhoods is still quite rare and the explorations are mostly done by the trenches of public network renovations.

### 3 Urban restructuring work

#### 3.1 *Terms and conditions of interventions*

The most frequent and emblematic projects of urban transformation are street layouts, public spaces and those which involve the alteration of underground networks. Now that the Canton has initiated a large number of these, this publication is conducive to an attempt to take stock of the complexity of monitoring within an urban context. Archaeological remains are threatened by projects which involve earthworks that cannot be altered. These are works of public and collective developments, subject to precise specifications. In such cases, the Canton systematically requests archaeological surveillance. The undertaking of archaeological survey prior to the works is very rare, because of the public nature of the areas. In the last decade, the surveillances, always located within a Région Archéologique (Archaeological Zone), has been almost systematically tackled by a private company. Prior to this, with the occasional exception, these were executed by the Archéologie cantonale (Cantonal Department of Archaeology), which did not allow for constant monitoring of earthworks. In practice, these cases engender administrative complexity as soon as an archaeological intervention is initiated. The primary reason is the difficulty in assuming the financial costs of archaeological monitoring. As stated previously, the costs lies with the town or city council and is never subsidised by the Canton. The presentation of a cost estimate from a private excavation company<sup>5</sup> often provokes a refusal that needs to be abated, often through heated discussion, while relying on fragile legislation and the sense of patrimony of the future contractor. The most common opposing argument is the absence of preserved artefacts, in an environment in constant evolution, specifically when revisiting the location of previous sanitation network construction. The heritage interest of this monitoring procedure is never obvious to the developer but sometimes evolves with the discovery of artefacts and remains. This process is unsatisfying for archaeologists working in the field, as they are dependent on the progress of construction, have intense technical constraints (such as the depth of excavation, the buttressing of sections which hinders their analysis) and work in a cramped space often crammed with pipes with their feet in water, whose dubious colour and odour is clearly indicative of its origin. Often archaeological remains, when discovered, are incomplete and their destruction is sometimes inevitable due to the nature of the situation. This mode of operation, which requires a subtle mix of diplomacy, discussion and persuasion, means that the results obtained – even if they are scientifically significant – may be inconsistent between sites.

#### 3.2 *The scientific results of archaeological trench operations*

Monitoring of the replacement of drains in L'Isle (Fig. 5, n°1 and Fig. 6) has improved understanding about the wooden foundations of the fortifications which protected the little

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4 Excavation Sophie Thorimbert, Archeodunum SA-2017.

5 The two main companies are Archeodunum SA and Archeotech SA.

town at the beginning of the fourteenth century. These have been dendrochronologically dated to 1299, which has been linked to documentary sources describing the original construction.<sup>6</sup> Technical arrangements facilitated the avoidance of their destruction by passing the pipework below the archaeology. This monitoring project also revealed historic improvements near the banks of the Venoge; timber structures protected the town wall from flood water (Menna 2016). The archaeological surveillance of new sanitation installations in Rue des Moulins in Yverdon-les-Bains (Fig. 5, n°2) revealed remains with a sequence running from the Early Middle Ages to modern times, with habitation levels from the sixth century.<sup>7</sup> Although too difficult to connect the postholes to reconstruct houses (Fig. 7) they still provided dateable animal remains. The Early Middle Ages is mainly known in Canton Vaud through burial sites which make these finds so unique in character. Furthermore the extremities of a modern ceramic production site were uncovered providing equally unique information on the material culture (Andenmatten *et al.* 2016b). In Grandson, street repairs in the Rue Haute and the Rue Jean Lecomte, two main streets of the medieval town (Fig. 5, n°3 and Fig. 8), were revealed in sections of the ancient town situated between the eleventh century castle and the church which formed part of the Benedictine Priory of Saint-Jean-Baptiste.<sup>8</sup> Thanks to wide and deep trenches (Fig. 9), a cemetery with 126 inhumations associated with the church, smithy slag, old facade boundaries including a burnt level, could be excavated. The remains were all destroyed by the works with the exception of the town gate which was well preserved despite blocks having to be separated. These will be drawn out at ground level with an accompanying information board with details about the nature of the finds for the public. So this pipe revision work has uniquely brought to light the unprecedented remains of the noble town of Grandson (Pedrucci *et al.* 2017). In La Sarraz (Fig. 5, n°4), there was also a section of the town's enclosure wall discovered with an accompanying filled ditch, during similar street repairs, as well as a pit filled with organic material including about one hundred fragments of leather.<sup>9</sup> Similarly in Bex (Fig. 5, n°5), street remodelling and revision of drains in Rue du Midi, caused the partial excavation of a cemetery with 125 graves associated with the church of Saint-Clément (Antonini and Moret 2013).<sup>10</sup> In Rolle (Fig. 5, n°6), round-the-clock surveillance of earthworks led to the unearthing of the modern and contemporary remains of this town on the lake shore with sometimes from two metre high stratigraphies,<sup>11</sup> no medieval vestiges were found, most probably having been destroyed by successive reworking of the area. This surprising result shows the extent to which the town has been modified to obtain its modern form (Laurent 2013). Surveillances carried out in Orbe Grand Rue (fig.5, n°7) did not result in the quantity of remains that had been expected.<sup>12</sup> Only very few finds, even recent ones, were unearthed. Ancient plans as well as historical sources indicated an early medieval origin but no clues were uncovered to either confirm or deny the ancient texts. The levels were probably successively erased leaving no detectable trace for archaeologists (Liboutet 2015a).

6 Excavation Aline Andrey, Archeodunum SA-2015-2016.

7 Excavation Romain Andenmatten, Archeotech SA-2015-2016.

8 Excavation Anna Pedrucci, Archeotech SA-2015-2016.

9 Excavation Fabien Krähenbühl, Archeodunum SA-2017.

10 Excavation Alessandra Antonini, Tera sarl, 2010.

11 Excavation Cécile Laurent, Archeotech SA, 2012.

12 Excavation Cathy Latour, Archeodunum SA, 2014.

Figure 6 (opposite page). L'Isle Wooden foundation of town wall from the 14th century (Archeodunum SA).

Figure 5. Map with the main urban surveillance trenches in the Canton Vaud (Archéologie cantonale).

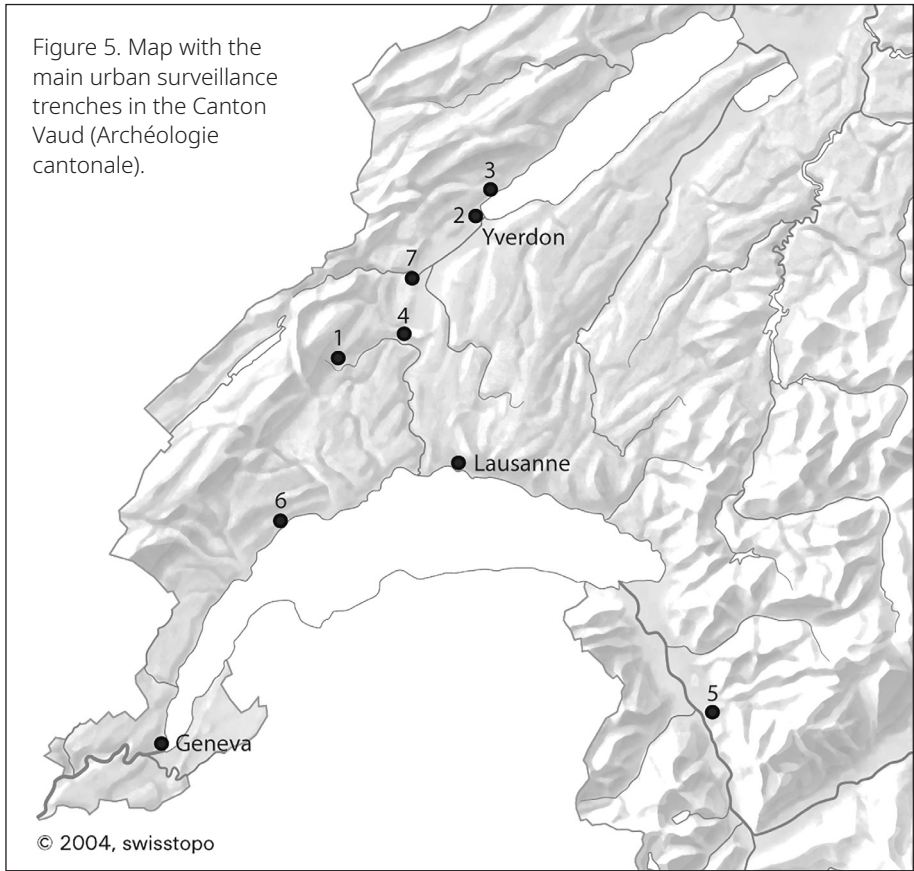






Figure 7. Yverdon Rue des Moulins. Early medieval postholes (Archeotech SA).

Figure 8. Grandson. Map of the town with the monuments and main discoveries of the trenches from 2015-2016. Cemetery, ancient habitation level, smithy remnants (Archéologie cantonale and plan courtesy of Archeotech SA).





Figure 9.  
Grandson view of  
trench excavation  
(Archeotech SA).

### *3.3 Provisional assessment of the procedure*

Beyond obvious scientific advances, it must be emphasised that projects are still difficult to implement in terms of administration. In fact heritage conservationists struggle to enforce the necessary conservation measures during the planning permission stage in order for the developer to obtain a construction permit. Often the construction site is already planned out and the budget finalised. The absence of a strict legal framework dealing with the financial responsibility ultimately leads to the contractor putting pressure on the authorities. Each construction is often preceded or accompanied by intense discussion concerning time frame, field work cost as well as post-excavation cost. In the end deadlines have to be compressed and choices made which could be detrimental to scientific understanding of the sites. Nevertheless archaeological excavations were undertaken and the results show that this approach does work. Water and sanitation restructuring work is common and archaeological surveillance of this enables us to investigate locations where more conventional construction projects do not occur. These examples of trench surveillance, with relatively small outlay, have often produced a wealth of information, contrary to the conventional wisdom that potential remains have all been destroyed by previous construction work. Certainly the structures unearthed are only partial, intertwined as a result of a construction history but also biased by urban transformation and more generally, the image that the town wished to present throughout the ages. The remains discovered in such contexts can either be preserved or destroyed during extensive excavations. In Lausanne structures of the old Archbishop's palace discovered during probes were not excavated but instead preserved as an archaeological resource. In Grandson the remains of the Porte de la Boucherie and the Porte de Giez

(gateways of the town) were only partially lost during the laying of pipe work as was also the case with the town enclosure walls of La Sarraz. In both cases information boards and even ground markings will be made to present and restore to the public the information gleaned through the construction work.

Outside the territory of Canton Vaud similar steps are taken. Remains of the Monastery of the Granval (Gerber 2009) were uncovered during archaeological surveillance of sanitation work beneath the pavement of the Rue Central in Moutier (Canton Bern). However opening up trenches in the urban street network is not entirely conducive for understanding the urban fabric. On this theme projects to renovate private buildings, whether civil or public, better address this issue.

## 4 Archaeological procedures in civil buildings

### 4.1 Context and operation

Aside from trench excavations, remodelling of the urban civil habitat confronts the heritage services with conservation and documentation issues. The Cantonal Department of Archaeology, through the Archaeological Regions, assures the protection and documentation of remains found below ground. Traditionally, above-ground structures are the responsibility of the Department of Sites and Monuments (Section Monuments et sites). This division of expertise hinder the creation of real structural archaeology operations and irredeemably, data is lost. Until relatively recently, the Department of Sites and Monuments commissioned structural analyses of buildings during renovation work. Currently, due to a reorientation of priorities, such studies are rare. Emphasis is instead placed on the conservation of elements *in situ*. Requests for analysis are not obligatory except in the cases where the building is already listed to grades 1 or 2. From grade 3 and beyond, the ruling of the Department of Sites and Monuments is only a recommendation that the local town or village authority, with whom the prerogative lies, can choose to follow or not. This results in old components being destroyed without having been documented according to structural archaeology methods. In instances where the impact is subterranean, the Cantonal Department of Archaeology requests an archaeological procedure in which documentation of the above ground structure is also included. The study of old buildings suffers therefore from the imposed division of below ground and above ground, which goes against the grain of the theory of buildings archaeology. This dichotomy is hardly efficient and almost absurd, when we consider that a building constitutes a whole. From a scientific perspective, structures should be considered from foundation to roof ridge, with the inclusion of the entire volume, as well as buried traces of its construction and its evolution within the space it occupies. Some sites have had different teams working on ground level and on the structure respectively. The results of this practice have been thoroughly examined and it is now a question of curbing this trend by combining skillsets and conducting comprehensive building studies. Canton Fribourg does not have this dichotomy: the directives are drafted mutually between the Department of Archaeology (SAEF Service archéologique de l'Etat de Fribourg) and the Department of Cultural Goods (Service des Biens culturels). Procedures on structures are entirely covered, both excavation and buildings archaeology, by the Department of Archaeology.

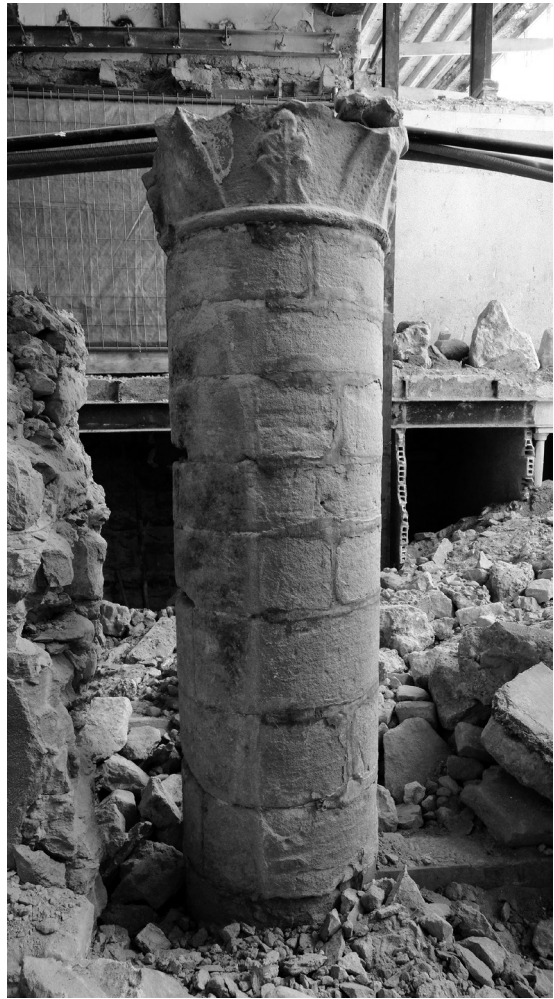


Figure 10. Lausanne Rue de Bourg 8. Photo of the capital UC27 with hooks and acanthus leaves dated from between the 13th and 14th Centuries (Archeotech SA).

#### *4.2 The results of procedures on civil buildings*

Nevertheless research has been carried out on urban civil buildings. These examinations have improved our understanding of the evolution of the urban fabric, and as more of this type of research is undertaken the processes of urbanisation will become clearer still. Let us consider procedures in the town of Morges, founded in the 13th century, Rue Louis de Savoie 51-53, Rue Louis de Savoie 58 and Rue Louis de Savoie 60 specifically.<sup>13</sup> In no's 51-53 the density of remains was significant and the oldest levels (postholes) were able to be documented in the depths of an elevator pit but the absence of artefacts meant they were undatable (Andenmatten *et al.* 2016a). Except these remains, the urbanisation of the plots was visible with a construction made of lightweight materials from the 17th century onwards in no. 51 while no. 53 was still vacant. Opposite these buildings, in Louis de Savoie 58, a structure emerged from the sixteenth century. At no's 58 and 60 the space had already been built on in the seventeenth century (Pradervand 2017). In Orbe, the

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13 Excavation Romain Andenmatten, Archeotech -2015-Excavation Aude-Line Pradervand, Archeotech-2017-Operation Jean-Blaise Gardiol, Sherlock'Home-2015.

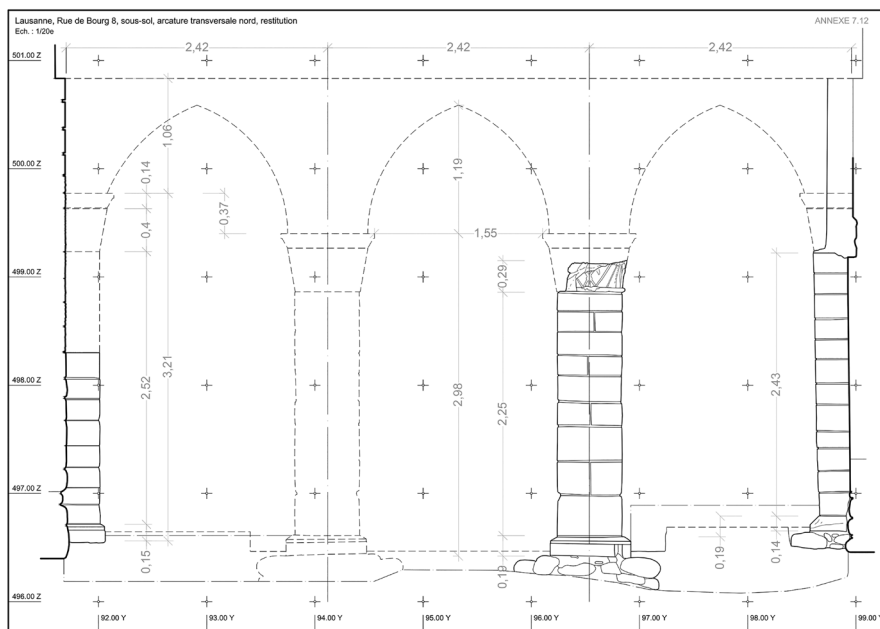


Figure 11. Lausanne Rue de Bourg 8. Reconstruction of the north transversal arch (Archeotech SA).

renovation of a large house structure, including a medieval tower, provided the means for its documentation and dating to the eighteenth century, as well as a completely unique section of the associated fortified town wall. The evolution of the building could therefore be reconstructed until the twentieth century (Liboutet 2014, 62-73).<sup>14</sup> In Coppet, three archaeological interventions in buildings in the Grand Rue nos 16, 46 and 51, provided data on the town's fortification system as well as determining the evolution of the buildings themselves (Pedrucci and Glaus 2014a; Glaus 2014; Gardiol 2016).<sup>15</sup> In Lausanne, the remains of a cellar containing columns with capitals dated between the thirteenth and fourteenth centuries (Fig. 10 and Fig. 11) were discovered during an intervention at the Rue de Bourg (Glaus 2017), a rare and unprecedented discovery.<sup>16</sup>

#### 4.3 Limits and obstacles

Currently town-scale summaries are not possible owing to an insufficient number of interventions to increase the amount of data. It is therefore necessary to undertake more research and launch both schematic syntheses and scientific study. Indeed archaeological management and intervention planning of urban projects can only improve. A cartographic synthesis of Yverdon-les-Bains, the second largest town in the Canton, is currently underway; this will incorporate all medieval and modern archaeological

14 Excavation Werner Stöckli, AAM-2012 and operation Marion Liboutet, Archéologie cantonale – 2013.

15 Excavation Anna Pedrucci, Archeotech SA-2013-Excavation Jean-Blaise Gardiol, Sherloch'home – 2014-Excavation Mathias Glaus, Archeotech SA-2013.

16 Excavation Mathias Glaus, Archeotech SA-2016.

interventions. Localised archaeological interventions already illustrates a clear absence of civil building intervention in the old town. We must look at recent projects such as the Rue du Lac (Pedrucci and Glaus 2014b) to find archaeological data on historic constructions. Geographic Information System data will nevertheless serve as a basis for a synthesis on heritage practices as well as scientific knowledge. It is absolutely necessary to extend this scheme to other towns beginning with Lausanne in particular. Beyond aspects of heritage, the management of urban projects suffers from the lack of reference studies concerning medieval towns but also concerning the medieval and modern eras in general (Liboutet 2015b). It is therefore a question of compensating for this absence with occasional specific studies but also with landscape studies which take into account that towns are part of a vast interdependent network.

## **5 Conclusion and perspectives on urban archaeology in Canton Vaud**

Thanks to the Régions archéologiques that protects urban centres and imposes work within their confines, the Canton Vaud endeavours to ensure the archaeological documentation of construction sites, concerning the renovation of urban networks or building transformation. The lack of the formal application of the Valetta Convention in Switzerland does not prevent critical analysis and action on heritage. Thanks to cantonal legislation and process management, the means are provided to protect archaeological remains, to document these remains and to ensure the disseminating of knowledge. In Canton Vaud we have seen the prevalence of trench fieldwork and the unprecedented quality of data they supply. An effort must be sustained and all construction sites be overseen despite the administrative pitfalls. Concerning buildings, conservation and study should be the watchwords for this process before it is too late and ancient material disappears. Finally emphasis should be placed on scientific analysis in order to exploit the information that operations of rescue archaeology have delivered over time.

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## References

- Loi sur la protection de la nature, des monuments et des sites 1969.* (450.11). Lausanne.
- Archéologie Suisse, Commission archéologie et aménagement du territoire 2017. La Situation de l'archéologie dans les législations cantonales. *Archeologie suisse*, 21. Available at <http://www.archaeologie-schweiz.ch/Comission-archeologie-et-amena.161.0.html?&L=3> [Accessed 11 Nov. 2017].
- Andenmatten, R., Carrard, F. and Bourqui, Y. 2016a. Morges, rue Louis-de-Savoie 51-53. *Archéologie vaudoise. Chroniques 201.*, 110.
- Andenmatten, R., Carrard, F. and Bourqui, Y. 2016b. Yverdon-les-Bains, Rue des Moulins. *Archéologie vaudoise. Chroniques 2015*, 117-118.
- Antonini, A. and Moret, J-C. 2013. Bex, Ancien cimetière paroissial de l'église Saint-Clément. *Revue historique vaudoise* 119, 362.
- Christe, F. 1996. Le Canton de Vaud. In *Stadtmauern in der Schweiz. Kataloge, Darstellungen*. Zürich: vdf Hochschulverlag AG an des ETH Zürich, 301-318.
- Freudiger, S. 2012. Lausanne, Rôtillon. *Revue historique vaudoise* 120, 474-476.
- Gardiol, J-B. 2016. Coppet, Ancien hôtel du Lac. *Archéologie vaudoise. Chroniques 2015*, 89-90.
- Gerber, C. 2009. Moutier, Vieille Ville. Découverte du monastère de Grandval. *Archéologie bernoise. Annuaire du Service archéologique du canton de Berne*, 98-101.
- Glaus, M. 2014. Coppet, Grand-Rue 46. *Archéologie vaudoise. Chroniques 2013*, 86.
- Glaus, M. 2017. Lausanne, rue de Bourg 8. *Archéologie vaudoise. Chroniques 2016*, 138-139.
- Laurent, C. 2013. Rolle, Rue du Port-Ruelle des Halles. *Archéologie vaudoise. Chroniques 2012*, 82-83.
- Liboutet, M. 2014. Orbe au moyen Âge, du nouveau sur les fortifications urbigenes, *Archéologie vaudoise. Chroniques 2013*, 62-73.
- Liboutet, M. 2015a. Orbe, Grand-Rue. *Archéologie vaudoise. Chroniques 2014*, 126.
- Liboutet, M. 2015b. *The archaeology of medieval rural settlements and urban habitation in western Switzerland: From rejection to absence of material culture*. [Poster]. 21st annual meeting of the European Association of Archaeologists, 3-5 September 2015, University of Glasgow, Scotland.
- Maroelli, D. 2016. Payerne, les Jardins de Montpellier. *Archéologie vaudoise. Chroniques 2015*, 113-114.
- Menna, F. 2016. L'Isle, la ville. *Archéologie vaudoise. Chroniques 2015*, 108.
- Pedrucci, A and Glaus, M. 2014a. Coppet, Grand-Rue 16. *Archéologie vaudoise. Chroniques 2013*, 6-87.
- Pedrucci, A and Glaus, M. 2014b. Yverdon, rue du Lac 11. *Archéologie vaudoise. Chroniques 2013*, 103-104.
- Pedrucci, A., Pradervand, A-L, de Raemy, D. and Menna, F. 2017. Grandson, Rue Haute-Rue Jean Lecomte- Place de l'église. *Archéologie vaudoise. Chroniques 2016*, 131.
- Pradervand, A-L. 2017. Morges, Rue Louis-de-Savoie 58. *Investigations archéologiques*. Unpublished.