EAC Occasional Paper No. 20

Urban Archaeology and the Cities of Tomorrow

Edited by Jeroen Bouwmeester and Koen De Groote

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Europae Archaeologiae Consilium

Urban Archaeology and the Cities of Tomorrow

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Brussels, Belgium, 21–23 March 2024

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EAC 25th Annual Meeting and Heritage Management Symposium

"Urban Archaeology and the Cities of Tomorrow"

21-23 March 2024
Brussels, Belgium

Programme

EAC – European Archaeological Council / Europae Archaeologiae Consilium / Conseil Européen d'Archéologie
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p/a Urban.brussels, Mont des Arts 10-13, 1000 Bruxelles, BELGIUM

Thursday 21 March 2024

09:30-11:00	**EAC General Assembly 2024** Launch of EAC19 publication Reports of the working groups Launch of new EAC guidance (Barney Sloane)
11:00-11:30	**Coffee break**
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12:00-12:30	**25th Heritage Management Symposium** Welcome: Bety Waknine, Director general urban.brussels Ann Degraeve, urban.brussels, President EAC Introduction: Koen De Groote & Jeroen Bouwmeester scientific coordinators
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09:40-10:05	Joep ORBONS: *Urban geophysics, Failures and Results, it's all in the Question*
10:05-10:30	Philippe SOSNOWSKA: *Archaeological Management of the Grand Place in Brussels: Building archaeological studies and geophysical surveys to enhance the city centre of tomorrow*
10:30-10:55	Yannick DEVOS: *Environmental Archaeology in Brussels (Belgium): The Development of a Framework*
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11:25-11:50	Kristina ADLER-WÖLFL: *GIS-Tools for the Urban Archaeology in Vienna. Site Mapping with Different Geometries*
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Saturday 23 March 2024 - Excursion

Departure at 9.00

AM: Visit of the Abbaye of Villers-en-Brabant (Wallonia)

PM: Guided tour of Antwerp's archaeology (Flanders)

Return to Brussels for +/- 5.00 pm

Conference Venue General Assembly and Symposium

Royal Library of Belgium (KBR), Brussels
Mont des Arts 28, 1000 Brussels
Access via Boulevard de l'Empereur 2

Foreword

It is my great honour and pleasure to introduce the proceedings of the European Archaeological Council's 25th Heritage Management Symposium. This year's symposium, centred around the theme of *Urban Archaeology and the Cities of Tomorrow*, has offered invaluable insights into the challenges and opportunities facing urban archaeology today, as our cities grow and evolve at an unprecedented pace.

The complexities of modern urban environments require us to constantly adapt our methods and thinking. The extensive data generated through archaeological investigations in the urban centres, inherently multi-dimensional, not only serve as a crucial resource for deepening our understanding of the economic and social histories of the cities. This knowledge also must play a pivotal role in the development of future urban environments and presents a unique opportunity to connect with the public benefits, central to the Valetta and Faro Conventions.

I would very much like to thank Drs. Jeroen Bouwmeester and Dr. Koen De Groote, who took up the scientific coordination of the symposium and this publication with remarkable expertise and dedication.

And I am deeply grateful to all the authors for their contributions, which will no doubt inspire new ways of preserving and understanding our shared heritage within dynamic urban landscapes.

Ann Degraeve
President
European Archaeological Council

Introduction:
Urban Archaeology and the Cities of Tomorrow

It is no coincidence that the 25th EAC symposium in 2024 was held in the capital of Europe, Brussels. At the same time, it is actually surprising that urban archaeology is only now taking centre stage. After all, this century of archaeological heritage management largely revolves around the Malta Convention and the Faro Convention. It is about engaging the public with its heritage and making society aware of its own past. And where else could all of this better take place than in the frontline of archaeological heritage management, the place with the greatest spatial and social dynamics: the city.

In terms of social cohesion in cities, the past can be very valuable. Sober expansion districts can gain a stronger identity by connecting to the past and reflecting it in its design. However, this is not something self-evident. Perhaps the greatest tension lies in the fact that historians and archaeologists have an eye for processes taking place over long periods of time, while society and the city, perhaps more than any other, are much more volatile and focused on the now and the immediate future. It is, therefore, precisely our task to keep holding up this mirror. No matter how great we think our civilisation is, we are also only a very small step in a much longer history. And again, nowhere is this better expressed than in cities, places that are many hundreds and sometimes thousands of years old, and where archaeological research reveals so visibly how generation after generation shaped space to best suit the wants and needs of the time. In this, too, we are not much different now from in the past.

Yet the impact of interventions in the soil is different now than it was a hundred years ago. Whereas urban archaeology speaks of a palimpsest – the subsurface of the city is an accumulation of archaeological remains – the character of interventions has changed over the past seventy years. One could speak of a *tabula rasa*. New projects remove everything that was there, including all the foundations, to make way for something new. This is a very clear break, which can have huge consequences for archaeological heritage management.

This symposium's theme was Urban Archaeology and the Cities of Tomorrow. Space is under severe pressure in the cities. Especially now, when many cities are putting much more emphasis on urban infill rather than expanding over the surrounding countryside. Preserving archaeological sites in cities is, therefore, complicated. So is excavating and researching sites. Many remains lie deep underground, and archaeology consists of an accumulation of traces and finds. Excavation is time-consuming and complex but, at the same time, it yields information about hundreds of years of habitation and use. The foci of the conference were how archaeology can contribute to urban society, how archaeological heritage management works in cities, and how a rich archaeological heritage can contribute to the cities of the future.

Themes of the symposium

Three working groups were active within the EAC at the time, which also formed the themes for the symposium:

Session 1: What Matters
Significance is at the core of management of urban archaeological resource. Since urban centres are multi-dimensional (with complexity in time and space), frequently with a very deep stratigraphy and often high land values and, thus, significant constraints on management choices, establishing significance and linking that to strategies for change management is crucial. This session looked at questions of defining significance in an urban setting, the tools available for managing urban archaeology, and case studies of protection and display. The papers are not simply descriptive but demonstrate where making choices can influence positive outcomes and help shape the urban landscapes of the future.

Session 2: Asking the Right Question
How do we keep on top of all of what we know from urban archaeology? Archaeology, historical records, maps, plans, and photographs form a huge resource for understanding towns and cities, but money and time are not limitless and key decisions need to be made to permit focus and prioritisation to get the best out of each investigation. Research frameworks can be a key tool in collating, focusing, and revising the key questions, linking the research design for each investigation to the wider research opportunities identified from work undertaken before. The papers present urban examples that show the potential of focused work and how it can advance research agendas and thus support future heritage management decision-making.

Session 3: Delivering the Goods
By definition, urban archaeology takes place in the busiest and most populated areas of any state. Large numbers of residents and workers are involuntary neighbours to new construction sites but also coincidental witnesses to the discoveries that take place under their feet. The public benefits of archaeology lie at the core of Valletta and Faro, and there are great opportunities to harness them during urban archaeological investigation. But what are these, and how can we capitalise upon them? How can we ensure these benefits create a positive legacy as our cities develop and change? The papers offer examples where tangible benefits other than the enhancement of the knowledge of our past have been successfully delivered in an urban context.

The volume
This volume contains a significant part of the papers presented at the symposium. The papers are divided according to the three different themes. The printed publication contains, in general, a short version of the articles with a selection of images. At the end of each article is a link to the online publication where the whole article can be found and downloaded. Both volumes conclude with a retrospective by Paul Belford.

As scientific coordinators, we enjoyed organising the symposium and editing the volume. The volume shows well the scope of urban archaeology and its great potential for now and in the future. We are grateful to the EAC for putting this theme on the agenda and to all the authors for their contributions. We hope this volume can contribute to a bright future for urban archaeology.

Jeroen Bouwmeester and Koen De Groote (editors)

This paper is available at https://doi.org/10.11141/ia.70.1

Time, space and people: urban archaeology and urban futures

Paul Belford

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Keywords: urban archaeology, archaeological heritage management, public engagement, urban planning, cultural heritage

This chapter provides some personal reflections on a range of issues around urban archaeology, focusing on the contribution that the discipline can make to placemaking for future generations. These reflections are grouped into three thematic areas: time, space, and people. It is argued that public engagement is critical for ensuring that archaeology realises its potential to positively influence future development.

Introduction

Archaeology can offer important insights into both the historical trajectory of urban places and the potential futures they may create. Modern towns and cities are simultaneously places of habitation and archives of human experience. The speakers at the EAC heritage management symposium – many of whom have also contributed to this volume – explored many aspects of the curation of these living urban archives. There were three key themes at the heart of the meeting: defining significance, managing research frameworks, and the practice of urban archaeology. One of the great delights of the process of heritage management, which is strongly reflected both in the symposium and this volume, is the way in which these themes are discussed and developed in different ways by different colleagues, each drawing on their own particular personal and cultural experiences.

Nowhere is this more apparent than in the understanding and articulation of cultural heritage significance. Several speakers at the symposium – including Thor Hjatalin, Dan Miles, Inge van der Jagt and Barney Sloane – reminded us that not all cultural heritage is equally valuable. Indeed, very similar cultural heritage may embody different values in different places and at different times. These values give rise to the notion of significance – but this too varies enormously between people and communities; moreover the structures and frameworks which we have developed to try and articulate those variations can be simultaneously inclusive and exclusive. Research frameworks are intended to help heritage managers prioritise, but can

sometimes act as constraints; guidance needs to be balanced with freedom to innovate and improvise.

Understanding the past can help us design urban spaces that are more inclusive, sustainable, meaningful – and indeed joyful – for future generations. But how do we achieve this? How can urban archaeology best inform our understanding of historical transitions, spatial networks and interactions between people and their urban environments? How will urban archaeology realise its potential to enhance the development of future cities? How might we – as archaeologists and heritage managers – create systems, frameworks, and processes which facilitate flexible engagement with cultural heritage in present-day urban settings, and engage modern populations in co-ordinated and coherent ways? This chapter offers a personal reflection of the symposium through three different lenses of enquiry and practice: time, space, and people.

Time

One of the most persistent challenges for archaeologists is enabling non-archaeologists to understand how we perceive time. The archaeological brain fluctuates between micro and macro temporal scales; our relative chronologies might sometimes be tied to absolute dates, but quite often they float freely in their own spectrum which is outside the linear date-based structure of historical progression that most people use when they think about the past – if they think about it at all. This creates a point of critical tension in urban archaeology, as Per Cornell pointed out in his keynote at the symposium. Of course it can be very helpful for archaeologists to construct narratives around familiar anchor points in public consciousness. Doing so helps facilitate the creation of research networks, makes it easier to frame funding applications, and provides accessible routes for promoting public awareness and understanding. This approach also has value in a heritage management context, where the significance of the archaeological resource can be clearly articulated to spatial planners and engineers, who can then manage their work to mitigate heritage impact – for example in Prague and Riga (Novák *et al*. 2025; Zirne & Lūsēna 2025). Similarly the complex Roman remains in the suburbs of Bregenz also clearly embody value which relates to a familiar historical theme, and so significance can be clearly articulated to non-archaeologists (Picker 2025).

However the downside of this approach is that it tends to reinforce existing narratives structured around conventional anchor points. This runs the risk of marginalising transitional phases – and these transitions can be critical to understanding the broader evolution of cities. Of course to undertake urban archaeology is to conduct a stratigraphic exercise, and in any excavation there will certainly be a difference between (say) Roman layers at the bottom and sixteenth-century layers at the top. However, only on very rare occasions does a hard line exist between one era and another. To paraphrase Indiana Jones, 'X' almost never marks the spot, except in the case of well-documented conflagrations or other catastrophes which leave a characteristic stratigraphic signature. Usually, medieval horizons become modern horizons only gradually and not always coherently. The distinction between one layer

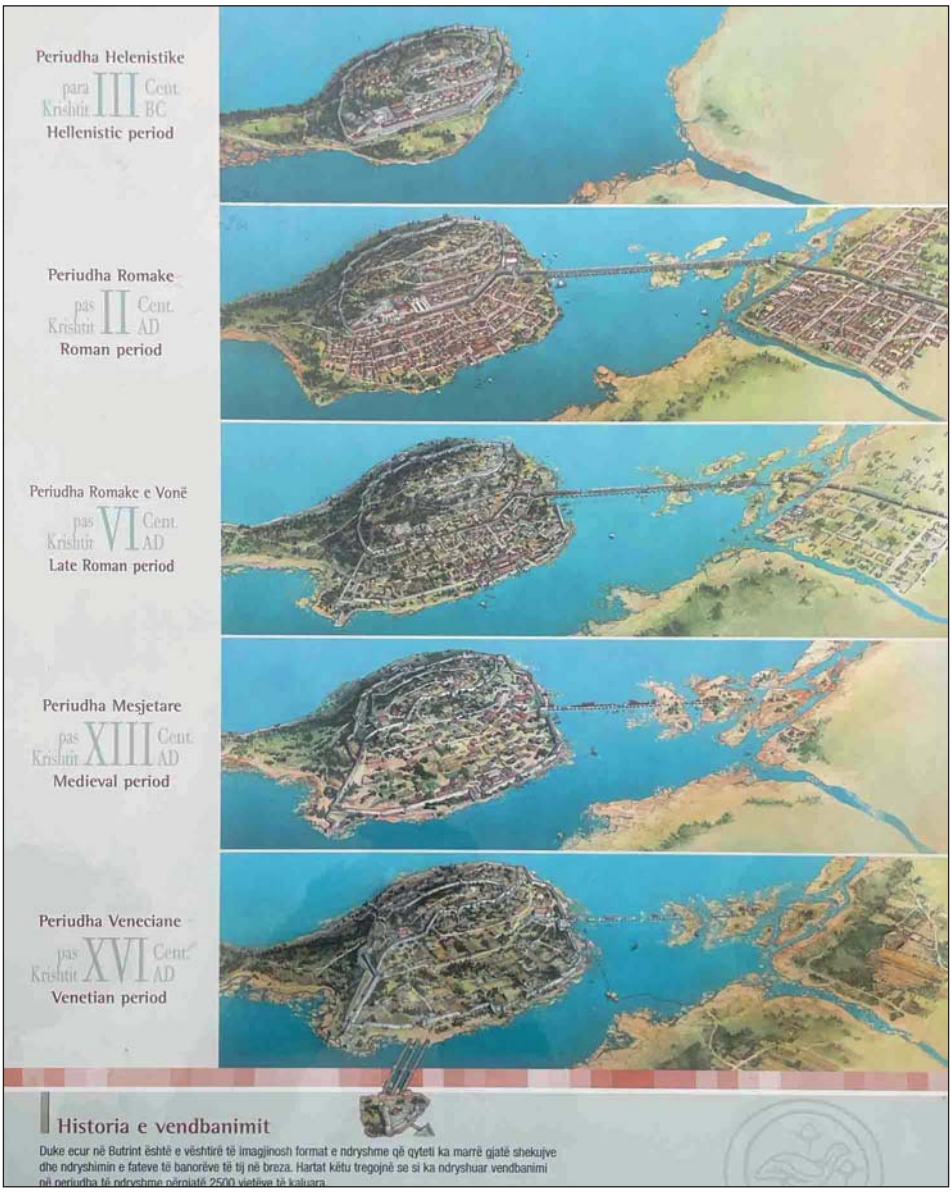

Figure 1. Time. Interpretation panel at Butrint, a complex multi-period urban site in southern Albania. Interpretation focuses on five main periods which reflect present-day understanding of the historical narrative rather than the archaeological understanding of the gradual evolution of the site (photo © Paul Belford)

and the next is subtle; it may only be evident through slight changes in material culture which only become apparent much later in the archaeological process. The point where one period stops and another begins is a fuzzy boundary that may represent several generations, or even several centuries.

The consequence of this historiographic prioritisation is that the archaeological record tends to privilege well-documented and extensively studied periods. Roman and 'high medieval' remains – or, as we see in this volume in the case of Antwerp, post-medieval fortifications – often dominate public discourse about European urban development (Carver 1997; Martens *et al*. 2020). Their survival also disproportionately impacts thinking about regeneration, and the way in which heritage can influence the creation of modern urban landscapes. Monumental or otherwise robust remains are easier to excavate, conserve, and interpret. They are tangible touchstones of history, helping to construct narratives of urban continuity and status (Figure 1). This sort of affiliation is a two-edged sword. For example the 1989 discovery of the Rose Theatre in London was presented in a way which emphasised its association with Shakespeare – generating wide public recognition of its archaeological significance, which ultimately sparked the adoption of 'polluter pays' principles in UK archaeology. However subsequent archaeological work on London theatres has remained framed by late-sixteenth century Shakespearean associations, rather than exploring other themes and periods (Bowsher 2012; Single & Davis 2021).

Such emphases can lead to oversimplified understanding and presentation of urban development, leading to the creation of 'grand narratives' which give 'a dominant impression of the past as a linear and homogenous development' (Christophersen 2022). The reality is more nuanced: transitional phases are characterised by complex cultural, economic, and social changes – however because they fall outside the conventional historical narrative even archaeologists fall into the trap of defining them as non-periods. Labels like 'post-Roman', 'early medieval' and 'post medieval' are well-used examples of these sorts of identifiers; there are also local versions relating to particular human or natural events. The result is the proliferation of non-periods – the gaps between the major milestones of linear historical narrative – and these tend to be overlooked both in heritage management practice and in public interpretation (White 2022). However, while archaeological evidence from these hyphenated non-periods may be less dramatic, it is no less important in enabling us to understand trajectories in the living entities that are European towns and cities.

These transitions often occur where the most significant changes in urban form, society and governance take place – and so they potentially offer insights into how societies adapt to shifts in political power, economic restructuring and environmental change (Pittaluga 2020; Smith 2023; Roberts *et al*. 2024). Unfortunately archaeological activity – including our understanding of significance – remains somewhat imprisoned by these resilient temporal structures. Many research frameworks are ordered by conventional periods and themes, and so run the risk of overlooking developments that fall between those boundaries. New research frameworks should seek to reflect these ambiguities, to try and better capture the fluidity of urban transitions by embracing the ambiguity inherent in urban evolution (Adler-Wölfl & Skomorowski 2025). A more nuanced

approach could explore dichotomies and oppositions: continuity/discontinuity, stasis/rupture, growth/decline, public/private and so-on. This can draw on a wide evidence base, including environmental archaeology, geophysical survey and geospatial data management and interpretation – as highlighted at the symposium by Yannick Devos, Paul Flintoft, Joep Orbons and others (Devos *et al*. 2025; Gaffney *et al*. 2025).

It is also the case that urban places are simultaneously both archaeological and systemic contexts which co-exist and interact (Bohn 2022). Therefore, urban archaeology only operates within the systemic framework of the modern town or city. Archaeological thinking about cities has begun to move away from traditional approaches rooted in sociological and functional explanations; instead becoming more concerned with urbanism as a series of more abstract dynamic processes and networks (Roberts *et al*. 2025). Urban places consist of relationships between people and places, and the constant renewal of those relationships – a process that has been characterised as 'energised crowding' – is what drives the generation and regeneration of towns and cities (Smith 2023). This brings us to the question of space.

Space

Urban places comprise many layers of highly structured spaces. Some of these are physical – streets, squares and buildings – and some are conceptual, such as spatial planning zones and administrative boundaries. Archaeologists use material evidence for the physical structuration of space in the past to try and understand how earlier societies created conceptual space; and we use conceptual space in the present to manage the conservation of those material remains for the future. On a close scale both physical and conceptual spatial structures are quite well-defined. For example a person is either on a street or not on a street, or a site is within a planning zone or outside it. However at a wider scale the boundaries between these structures are rather more hazy, and many of these interfaces exist on a continuum (Simon & Adam-Bradford 2016). Moreover, cities are defined not only by what occupies space but also by what does not: those seemingly 'empty' spaces which serve as connective tissue within urban environments. These are transitional spaces, where unregulated and unconventional activities take place – both now and in the past. These liminal or marginal places can host several different types of urban practice: spontaneous appropriation, subversiveness, empowerment, and flexibility (Pittaluga 2020).

This ambiguity is reflected in the practical understanding derived from archaeological practice. Many places which are urban today were not so in the past; conversely places with urban characteristics serving urban functions in the past did not survive beyond very specific sets of political, economic and cultural circumstances (Hodges 2022). In other words, urban space in the archaeological record is often 'fuzzy': boundaries between periods, cultures, and uses of space are rarely clear-cut. In contrast, modern urban planning relies on precise boundaries, whether they are zoning laws, property lines, or infrastructure maps. This creates a tension between the fluidity of archaeological interpretation on the one hand, and the rigid spatial demands of urban development on the other. There are therefore two aspects of space to consider. First is the tension between what we might call 'archaeological space' and the real

Figure 2. Space. Screenshot of the Historic Environment Record for the English town of Chesterfield, showing various heritage constraints and their overlapping hard boundaries, which do not align well with each other or with the underlying urban fabric (image © Derbyshire County Council)

world. Second is the nature of urban space itself – and how its significance is, or is not, considered in the day-to-day practice of heritage management.

Spatial planning and other modern urban functions require 'hard' boundaries. Geospatial data is managed through a series of polygons which have edges. Things are either inside these areas or outside them. These polygons have often been created at different times for different reasons, and so they often overlap and may even contradict each other. Even 'heritage' polygons are not always consistent (Figure 2). Areas of archaeological significance may not align with protection zones for historic buildings and streetscapes. In some cases there is no intellectual reason why they should – the archaeological remains may belong to entirely different periods and landscapes to those above ground (Bouwmeester 2025). However in some places this discontinuity is a result of the present-day structures within which heritage management takes place. In the UK, for example, the conservation of the above-ground built environment and the management of the below-ground archaeological environment are the responsibility of two different groups of professionals – each with their own set of guidelines and standards and usually operating in separate parts of local (municipal) or national regulatory authorities.

These hard boundaries make it easier for heritage managers to make decisions about significance within a legal or quasi-legal framework. But of course the boundaries themselves can be quite arbitrary as they rely on the historical record of archaeological intervention – which is itself serendipitous and inconsistent. Therefore these boundaries

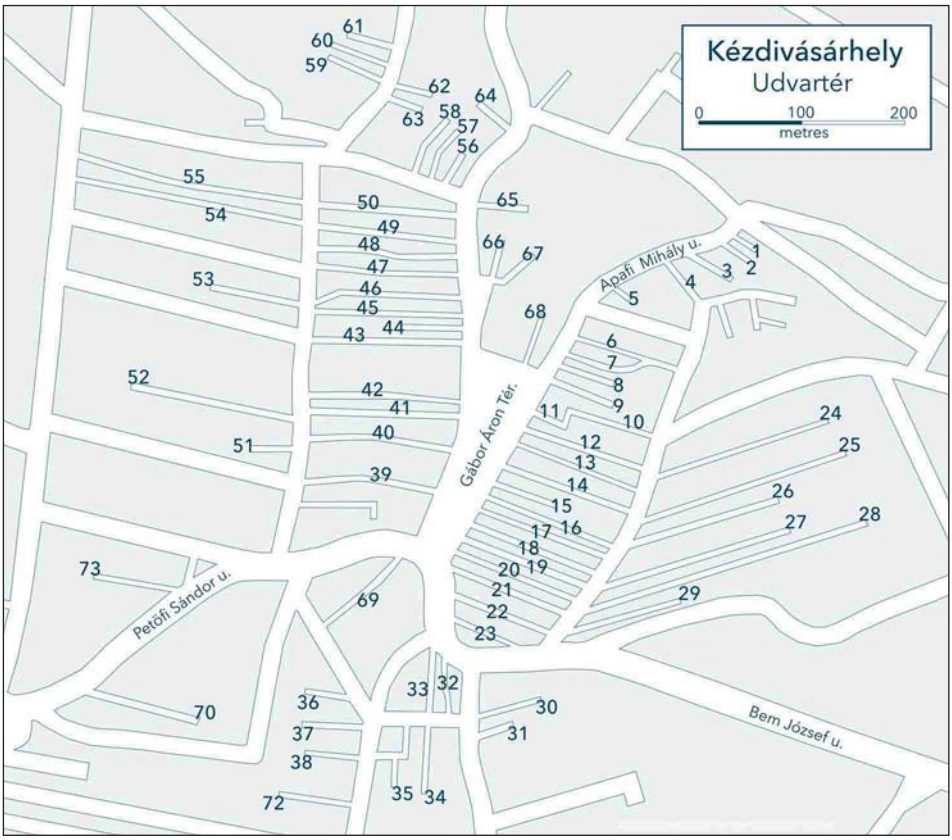

Figure 3. Space. Plan of the Hungarian town of Kézdivásárhely, currently in Romania. Kézdivásárhely features a unique network of unnamed but numbered passageways (*udvarterek*), which radiate from the main square. They provide access to individual properties and create cross-town connections (drawing © Heritage Innovation Limited)

of archaeological significance are often a best fit between the known and the unknown, or the suspected and the unlikely. Archaeological understanding results from the very intense observation of quite small spaces: a high-definition micro-spatial approach which can be very valuable in academic terms, particularly in comparative studies of population dynamics (Christophersen 2022; Jakobsen *et al*. 2022). However cities are complex, layered entities. Evidence from the past does not neatly fit within modern property lines or planning zones. A Roman road may extend beneath several modern buildings; a medieval marketplace may be cut off by contemporary infrastructure; or a modern square may obscure dense medieval occupation (Bryant & Dupuis 2025; Lassau 2025; Picker 2025). It is therefore difficult to define clear boundaries of historical or cultural significance, which can create significant challenges for decision-making in an urban spatial planning context.

This brings us to the second aspect of space, which is the significance of empty spaces. As we have already seen, urban places comprise dynamic networks of connections between places, and those connections are central to the creation and evolution of urban life and identities. Therefore these empty spaces – seemingly 'non-places' – are vital to understanding how urban places function as networks (Jervis *et al*. 2021). However it is much easier for archaeologists to deal with the physicality of buildings, roads, ditches, pits and other tangible things; it is also much more straightforward to ascribe significant to these elements of the urban fabric than to less tangible spaces (Howell 2000; Giles 2007). Space is the absence of these things and so becomes more challenging to deal with both academically and managerially. Even well-defined spaces – burgage plots, lanes, squares and so-on – extend beyond individual projects, which make them harder to consider; nevertheless with careful project design and management extensive and detailed archaeological evidence can be recovered for their creation, modification and use (Tys 2020). Open spaces, whether public, private, or somewhere in between, were (and remain) places of dynamic subversion and creativity that are central to urban development (Figure 3). Understanding the role of these empty spaces in the past can help contemporary planners design cities that foster social interaction and community cohesion.

Understanding networks is about more than simply recognising the different and changing uses of particular spaces. Using a network approach to urban evolution can interrogate the role of connectivity in creating and inspiring changes and continuities. Networks are multi-scalar: ranging from interactions between communities in urban neighbourhoods, to landscape-scale interactions between centres and their hinterlands (Raja & Sindbæk 2021). These networks are reflected in the archaeological record through material culture; archaeologists' role is to interrogate this record to ask questions about the human actors who created these networks. How long did these networks last? How effective were they? What was the extent to which individuals or social groups had agency within them? This brings us to the subject of people.

People

The consideration of time and space is not an esoteric philosophical concern, but an issue which has a direct bearing on the challenges of inter-disciplinary working and public engagement. It is quite easy for heritage professionals – and archaeologists in particular – to delve very deeply into questions of typology, matters of form, fabric and function, and other highly specialised considerations. Of course the *raison d'être* for many archaeologists is to become highly absorbed in abstract specialist interests: a particular type of building, or a certain assemblage of pottery, or the micromorphology of a specific soil horizon. However when we do so, we must remember that these are simply the material manifestations of human endeavour. At the end of the day our work is about people. People in the past – but more importantly, people in the present and future.

This chapter has already briefly touched on the fragmentation of heritage professions when discussing time and space. It is worth expanding on this, since it impacts our ability to communicate with others outside our various bubbles. There can be

significant divides between what we might loosely call 'academic' and 'managerial' approaches to heritage, and in particular to notions of value and significance. Academic archaeologists tend to work within highly specialised and theoretically-driven frameworks, using relatively small datasets to make wider inferences with reference to other academic studies. The results may provide valuable 'big picture' insights about the past, but are not always accessible or helpful for managing the present. On the other hand commercial archaeologists tend to work in diverse multi-disciplinary professional contexts where work is driven by pragmatic legal, political and financial processes. They often generate and make use of massive datasets, but their focus is on assessing and mitigating damage to individual archaeological sites in the present. Their results may provide valuable detailed information about a particular location in space (and time); but resources for synthesising wider regional or period data are usually extremely limited. Heritage managers work to reconcile those tensions between academic and commercial mindsets to achieve the delivery of projects and services; however our primary duty is to balance conservation and urban development in the present. Therefore our focus must be on preservation (both *in situ* and by record) and public understanding of cultural heritage.

These three approaches are not in opposition, but they have different goals and operate in different sectors of society and the economy. Regardless of whether we are using a model of state-led procurement (like France) or a model of private-sector delivery (like the UK), all of our work – whether academic or pragmatic in origin – is paid for by the public, and is therefore in the service of the public (Bryant & Dupius 2025; Lassau 2025; Malliairis 2025; Seppänen 2025). However, there are gaps between how we as heritage professionals understand and present our work, and how the public perceives the issues with which we are grappling. To some extent our communication issues are internal, because as archaeologists and heritage managers we understand the concept of 'significance' in particular ways. However our use of jargon – specialised terminology like 'significance,' 'heritage assets,' or even 'heritage management' – maybe helpful to us, this may not resonate with the broader public. This disconnect can make it difficult to convey the importance of urban archaeology in the broader context of redevelopment, regeneration and plan-making (Ortman *et al*. 2020). And we need public support to help us do the best to understand and protect the urban archaeological resource (Figure 4).

Engaging the public in meaningful ways is critical. Urban archaeology has the potential to connect the people of the past with the people of the present in interesting, inclusive and thought-provoking ways. Conventional modes of public outreach – including various combinations of community excavations and educational programmes, interpretation embodied in modern landscaping, and preservation *in situ* – all serve to increase public engagement (Dubisch 2025; Seppänen 2025; Zirne & Lūsēna 2025). However these sorts of approaches tend to be 'top down' on at least some level; they present the perspective of the expert specialist in a traditional historical framework. They do not always engage proactively with the modern communities which occupy (or will occupy) the new spaces that are being created.

Figure 4. People. A group of schoolchildren visiting an archaeological excavation in the English industrial town of West Bromwich, an area with high unemployment, low educational attainment and significant levels of poverty and disadvantage (photo © Paul Belford)

As noted above, urban spaces are simultaneously both archaeological and systemic contexts, and they are also dynamic. Some of the most interesting relationships in urban places past and present take place at the margins, in those interstices between formally demarcated spaces, or between public and private space (Lutzoni 2016; Pittaluga 2020). These relationships may be more easily explored through non-traditional forms of interpretation and public engagement. Ideally the increasing deployment of high-definition digital recording methods, including 3D models and 'digital twins', can also serve to generate exciting new tools and approaches for meaningful public engagement (Gaffney *et al*. 2025; Jacobsen *et al*. 2021). Dynamic digital interpretation can help make the past more accessible and relevant for modern audiences. Moreover there are long-lasting and deeply-seated relationships between urbanisation and environmental change: the archeological record can help explore the interactions between human and natural ecosystems (Laubichler & Renn 2015; Roberts *et al*. 2025). Sometimes therefore public engagement may take on a political dimension, whether in support of a particular development or in opposition to the social transformation that it represents (Arcos García 2025).

Conclusion

Urban archaeology offers invaluable insights for understanding the past, but its relevance extends far beyond historical curiosity. Our understanding of the historical experience of urban places can, and should, inform the design and development of places in the future. Most of that historical experience is about incremental change, small in scale and relatively slow in pace. The urban fabric, the grain of streets and properties, is resilient and long-lasting – and even, as in the case of Lübeck, can be revived when seemingly lost (Dubisch 2025). Even quite dramatic remodelling in the past has usually been confined to small areas, as Philippe Sosnowska articulated at the symposium using the Grand Place in Brussels as an example. Of course there are a handful of exceptions to this picture – post-1755 Lisbon, Haussmann's Paris, modern Tiranë – but generally the process of European urbanisation has taken place on a human scale. We must hope that our understanding of the complexities of how European urban spaces have evolved and shifted – and the ways in which people have navigated around those spaces – will help inform the development of future cities.

The archaeological evidence overwhelmingly shows that cities are at their most functional when they balance connectivity with open spaces, fostering social interaction and economic activity – in other words the process of 'energised crowding' discussed above. Dysfunctional cities, by contrast, tend to be characterised by fragmented spaces, disconnected infrastructure and a lack of coherence between different parts of the urban landscape. As urban populations continue to grow, cities will face new challenges in terms of sustainability, infrastructure, and social cohesion. The individual case studies in this volume highlight the collective value of archaeological understanding of urban development in the past. From this it would be possible create a widely applicable framework for studying urban dynamics, land use and social change.

Our work as urban archaeologists and heritage managers needs to be about much more than preserving remains *in situ* or creating 'archaeological parks' and interpretation panels. Yes, these lumps of stone and brick are important artefacts of the past. They represent the past, but they aren't actually the past. They exist in the present, and require interpretation to make themselves relevant to people today, and in the future. Perhaps we need to be a bit less precious about the physicality of the past, and think more creatively about how we use the stories that our work generates.

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Session 1

What Matters

The excavations in the city of Lahti in 2013 contained the documentation and studies of the long history of the site from the Middle Ages until the early 20th century (photo © Lahti museums / Lahden museot)

Management of the urban archaeological heritage in Prague: benefits of collaboration

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Keywords: urban archaeology, information systems, data management, data re-use, conservation planning, sustainable development

Prague is one of the European cities with very complex archaeological remains, formed by continuous development dating back to the 9th century. Its archaeological community soon recognised the need for adopting a systematic approach to research and the importance of creating sufficiently rich sources of information on the sites in the area of the city. Two institutions were pivotal in this process: the Institute of Archaeology of the Academy of Sciences of the Czech Republic in Prague (IAP-CAS) and the Prague office of the National Heritage Institute (NHI). Both have devised their own conceptual frameworks for managing Prague's archaeological monuments within the Prague Heritage Reserve.

An Archaeological Documentation Point (ADB) represents a discrete unit of archaeological fieldwork knowledge, created during a specific cognitive process (fieldwork event) and typically consistently described in detail. In the 1970s, L. Hrdlička (IAP-CAS) initiated a programme of systematic data collection on ADBs within the Prague Heritage Reserve. His principal focus was on the anthropogenic alterations to the geomorphology of Prague's city centre (Figure 1), which led him to define ADBs not only in terms of their spatial location but also in relation to the elevation of main stratigraphic layers, which he identified as a crucial descriptive attribute. Each ADB was associated with metadata, including the author of the fieldwork event, the author of the scientific description, the executing institution, and the year of excavation. Additionally, basic context and observations were documented (Hrdlička 2009). Resulting database was reworked and digitized as part of the Integrated Information System of Archaeological Resources of Prague project (2013–2017; Boháčová *et al*. 2015).

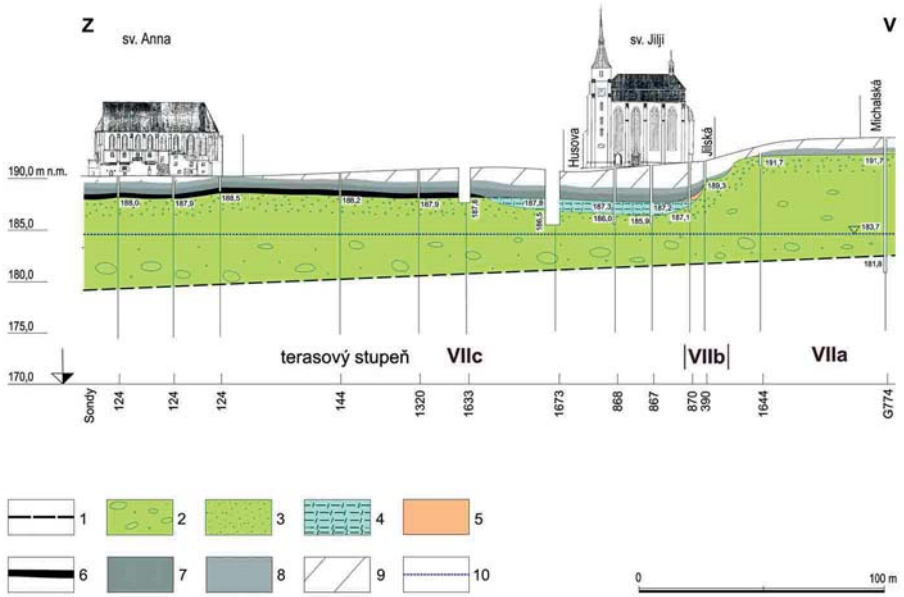

Figure 1. Prague–Old Town, south-western part. Reconstruction of settlement progression across the valley based on ADB elevation data (Hrdlička 2009, 10)

Currently, the IAP-CAS is responsible for the administration of the ADB collection as part of the Archaeological Map of the Czech Republic (AMCR), with 7,150 registered ADBs (apply for August 2024). The ADBs are primarily published on the Prague Archaeological portal, with data also accessible via the AMCR and its Digital Archive.

The frequent threats and increasing cases of disturbance to the archaeological contexts led Prague archaeologists, primarily affiliated to NHI, to define the form and scope of these assets, including the formulation of parameters and instruments for its preventive protection in the form of the Valuable Archaeological Areas (VAP; Figure 2). VAPs can be characterised as intact archaeological 'preserves', comprising a sufficiently illustrative settlement sample that encompasses all settlement components from the historical development of the site. As early as 1999, representatives of PAK identified 122 such areas. Each area was accompanied by a brief explanation of the proposal and the recommended treatment regime. Later, the VAPs underwent a revision, resulting in the comprehensive register of individual areas, comprising a detailed description, an expert justification of the area's significance, a review of existing sources and a recommended monument treatment regime. The total number of areas included in the register was 140, with an area of 0.412 km^2 (see NHI 2020–2021). The VAP project has been made available to the various stakeholders through NHI applications, namely the Information System for Archaeological Data (ISAD) and the Monuments Catalogue.

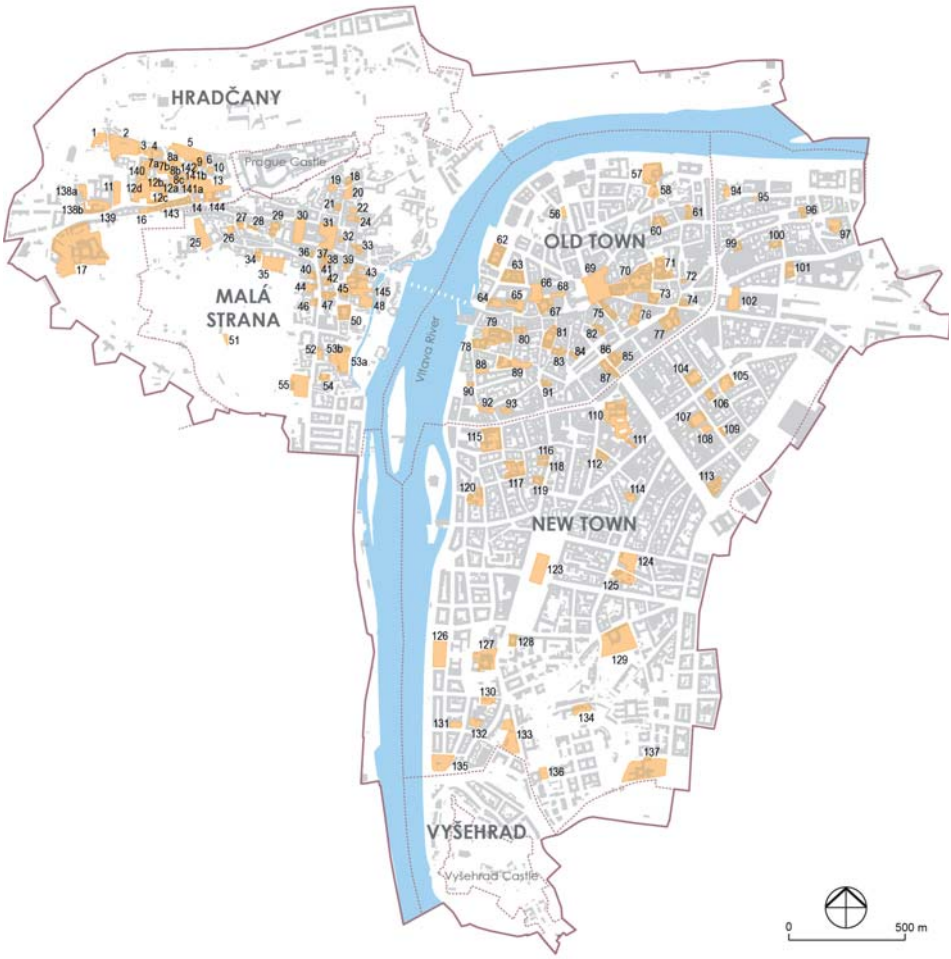

Figure 2. Historic centre of Prague, location of Valuable Archaeological Areas after the last update (© National Heritage Institute, 2024)

Recent years have seen effective use of this data in the protection of the archaeological heritage, particularly through cooperation with the Prague Institute for Planning and Development (IPR), an organisation established by the city for spatial development and related strategic planning. The VAP data layer was incorporated as an informative resource in the Planning Analytical Materials (PAM) update of 2010. However, it was the collaboration between IPR, NHI, and IAP-CAS during the PAM 2024 update that led to a notable enhancement of the archaeology-related content. For the first time, PAM 2024 presents a comprehensive display of the frequency and structure of archaeological finds across the entire area of Prague (Figure 3). VAPs were also incorporated as part

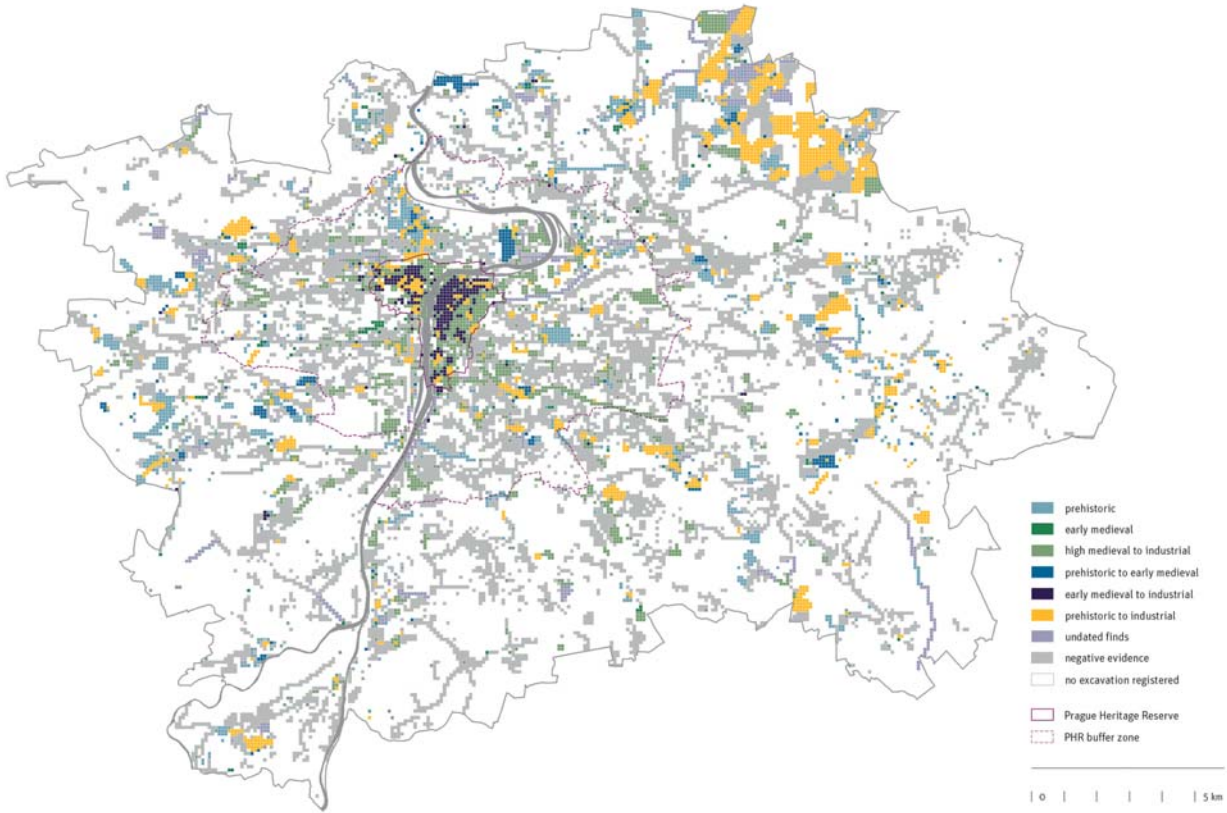

Figure 3. Comprehensive view of the frequency and structure of archaeological finds in Prague based on AMCR data
(© Prague Institute of Planning and Development, 2024)

of the cultural-historical constraints on land use, integrated within the overarching Land Use Limits of the Prague Heritage Reserve. The incorporation of VAPs into these limitations enabled an evaluation of their consistency with documented development plans for the area. The subject of Prague archaeology also forms part of the assessment of sustainable territorial development, which is a compulsory synthetic component of the PAM update.

The advantages of a transparent definition of heritage priorities are evident in the collaboration between heritage and public administration sectors. The data are being utilised to gain a deeper comprehension of the requirements of heritage management and these insights incorporated into strategic decisions and recommendations. Enhancing the system's transparency and accessibility facilitates a more constructive exchange of arguments, increasing the probability that they will be duly considered and reflected in development planning processes.

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Archaeological heritage in the Historic Centre of Riga: status, management, development

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Keywords: Historic Centre of Riga, Old Riga, archaeological complex, fortifications, bastion, development

The origins of the city of Riga can be traced back to a small area on the right bank of the Daugava River, inhabited from the 11th–12th centuries. The city developed over the centuries, and suburbs were formed outside its fortified core. The oldest part of the city is protected as an archaeological monument, the core of Riga's historical centre. The Historic Centre of Riga is included in the UNESCO World Cultural Heritage List. The spatial development of the Historic Centre of Riga and the preservation of cultural heritage therein are regulated by a special law. The cultural and historical environment of the Historic Centre of Riga is particularly attractive to developers, and because of economic pressure, questions are often raised about the importance and potential of preserving its archaeological heritage.

Introduction

Riga, the capital of Latvia, is located on the coast of the Gulf of Riga, at the mouth of the Daugava River, an important international trade route between the Baltic and Black seas since the Iron Age. Due to its location on this important ancient trade route, Riga has been an international trade centre since the beginning of the 13th century. Because of its strategic location, Riga was built into a fortress many centuries ago, creating problems for the city's future development.

Historical background

Archaeological investigations of the oldest part of Riga proved that two settlements with distinct burial grounds were located on the peninsula where the small Riga River (Rīdzene) flowed into the Daugava already in the 11th–12th centuries. Bishop Albert founded Riga in 1201 and transferred his episcopal seat there, making the ascending city centre of religious and military activities during the Livonian Crusade. The city was surrounded by a defensive wall extended several times. In 1282, Riga became a member state of the Hanseatic League. After the Livonian War (1558–1583) and the collapse of the Livonian state, Riga came under the rule of Poland.

With the construction of ramparts in the 16th century, the territory of Riga became limited, and suburbs began to form. In 1621, the city came under the rule of Sweden. The fortification system was gradually improved, and the suburbs were developed based on plans. In 1710, after the Great Northern War (1700–1721), Riga came under the rule of the Russian Empire. The fortifications lost their strategic importance in the 19th century, and the demolition of the fortifications became permitted in 1856. In the 1930s, several blocks were demolished in Old Riga to give place for new public buildings. A part of Old Riga was destroyed in World War II.

Old Riga Archaeological Complex

The 'Old Riga Archaeological Complex', the oldest part of Riga, is protected as an archaeological monument of national significance (https://mantojums.lv/cultural-objects/2070) (Figure 1). This status provides comprehensive protection for all archaeological evidence in its area regardless of type and degree of preservation. The 'Old Riga Archaeological Complex' is a part of the 'Historical Centre of the City of Riga', a cultural monument of urban development of national importance (see https://mantojums.lv/cultural-objects/7442).

Status and legal framework

The central part of Riga was inscribed on the UNESCO World Heritage List in 1997 (https://whc.unesco.org/en/list/852). The UNESCO object includes the Old Riga

Figure 1. The territory of the Old Riga Archaeological Complex (photo © J. Dambis)

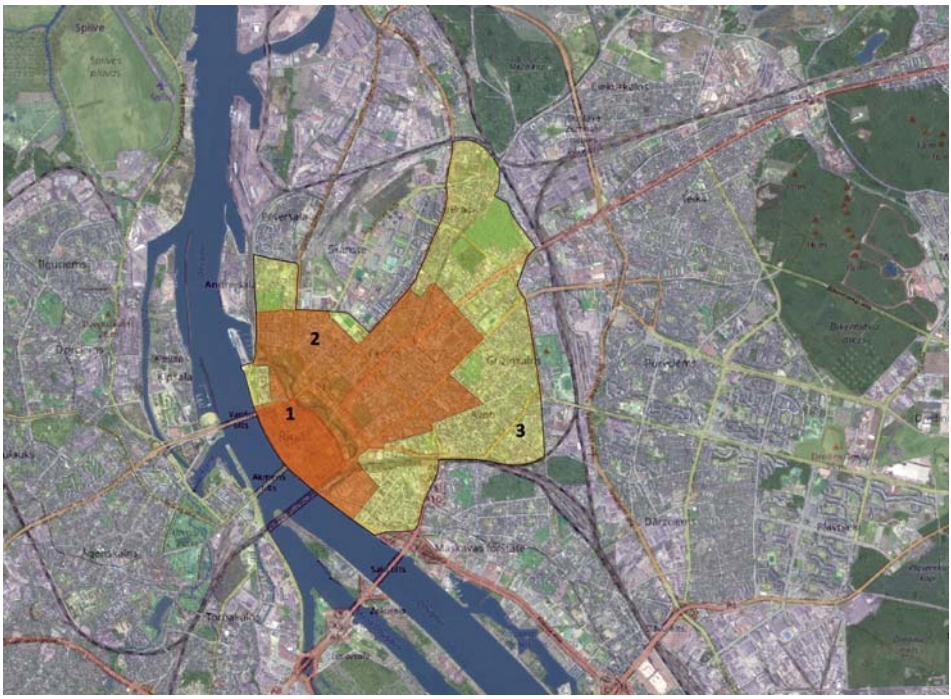

Figure 2. The protected area of the Historical Centre of Riga. 1, Old Riga Archaeological Complex; 2, UNESCO World Heritage Site – Historic Centre of Riga; 3, a cultural monument of urban development- Historical Centre of the City Riga (© E. Lūsēna)

Archaeological Complex, which is also included in the Historic Centre of the City of Riga (Figure 2).

The territory outside Old Riga does not have an archaeological monument status; however, as an element of cultural heritage, its management is regulated by a special 'Law on Preservation and Protection of the Historic Centre of Riga', adopted in 2003. According to this law, the archaeological cultural layer, one of the authentic cultural and historical values of the Historic Centre of Riga, shall be preserved and protected, which ensures archaeological research outside Old Riga.

Development and investigations

Triangle Bastion

The Old City and the Historic Centre of Riga faced the greatest threats at the turn of the millennium due to growing economic pressure on cultural heritage. There was a plan to build a multi-storey car park in Old Riga, where historical fortifications and the Triangle Bastion were located. The 18th-century Triangle Bastion was completely uncovered during the related archaeological monitoring work. The stone constructions have

been uncovered to a depth of approximately 1.5–2.7 metres (Lūsēns 2002, 261). After a long discussion, the remains of the Triangle Bastion were preserved inside a modern building.

Šēra Bastion

Due to the construction of a new railroad, the reconstruction of the nearest streets of Old Riga started in 2023, exposing a detail of the 16th–17th-century Šēra Bastion at a depth of about 50–70 cm from the current street level. The bastion fragment was preserved *in situ*; only about 30 cm of its upper part was dismantled to ensure the functionality of the street.

St. Gertrude cemetery

Several cemeteries dating from the 14th to the 18th century are known in the Historic Centre of Riga. The most extensive archaeological excavations were carried out in the St. Gertrude cemetery in 2006 in relation to a project to erect a new building with an underground space in the area. More than 709 graves of 719 individuals were discovered in an area of about 200 m² (Figure 3). Six layers of burials, 8–9 layers of mass grave trenches, and 'bone pits' containing the remains of more than 2,000 disinterred individuals from dismantled graves were also found there (Lūsēns 2008, 144).

Figure 3. Burials discovered in the archaeological excavation led by M. Lūsēns in the St. Gertrude cemetery (photo © M. Lūsēns)

Kobronskanst

A completely different situation occurs on the left bank of the Daugava outside the Historic Centre of Riga. Historical maps show a fortification called Kobronskanst on the left river bank opposite Old Riga in the 17th–19th centuries. Archaeological monitoring was carried out on the site during construction works for the Academic Centre of the University of Latvia in 2014, revealing a 2.5–3, at points even 4–4.2 m-thick cultural layer in the area of the fortification (Lūsēns 2016, 119). As a result, the relics of the Kobronskanst were included in the List of state-protected monuments in 2015 (https://mantojums.lv/cultural-objects/9223).

Conclusions

Archaeological evidence of the city's history has been discovered at various points and to diverse extents in the Historic Centre of the City of Riga. The preservation and research of the archaeological record is ensured within the framework of the current legislation. As far as possible, archaeological remains are preserved *in situ* in Riga. Despite the legal background, problems have arisen recently in relation to large construction and reconstruction projects. Developers are increasingly looking for opportunities to use underground spaces in new projects, even in the territory of Old Riga. On the one hand, this opens up opportunities for archaeological research, but on the other hand, it gradually depletes the cultural resources represented by the archaeological record of Old Riga.

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Digital Twins at the city and town scale – Europe and beyond

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Keywords: Digital Twin technologies, creative economy, place-based research, identity, social inclusion

The last ten years have seen great strides in digital heritage outputs, with 3D digital documentation becoming increasingly commonplace. Methods that widen participation and increase access have led to valuable community-scale documentation from artefacts to landscapes (Ch'ng *et al.* 2023).

Our approaches include mobile mapping technologies that were developed to mitigate heritage destruction and loss that had occurred through conflict and mass disasters. Our focus has shifted to anticipating heritage loss and ensuring that accurate records exist for heritage assets, whilst engaging planners to anticipate the needs of the cultural heritage sector. Our scaleable approach spans individual heritage assets at risk, to streetscapes and cityscapes.

Virtual Bradford, one of the first open data LoD3 city-scale digital twins, provides an accurate digital representation of the City Centre encompassing several conservation areas and multiple listed buildings. It produced a seamless data-rich model embracing heritage at its core, whilst addressing the demands of the twenty first century.

Responding to the UN year for creative economy, advocating cutting-edge research and creative approaches for sustainable development, we extend our approach to

digital twin development at the 19th-century colonial city of Bagamoyo, Tanzania. Scalar approaches help bring planning, regeneration and related decision-making to the public and other stakeholders, leading to increased topophilia that includes heritage at its heart.

Guidance understandably focuses on the potential of asset information models as part of 'Historic BIM' for condition monitoring, conservation, repair, and maintenance. In contrast, local authorities often consider dynamic change, providing opportunities to refine/ adapt the capture process and specifications to the level of detail required. The variety of desired outputs is hugely important to the approaches that are used. To create a usable, responsive dynamic digital twin model that can be shared easily with others, a level of detail is included in all model specifications.

Underpinning our work are several phases of substantive investment in research data storage via Research England and UKRI World Class Labs. This has resulted in several petabytes of usable storage with replication, inclusive of a Dell PowerScale Research Storage system with 1.5PB usable storage across different storage tiers/ nodes and a 3rd location (cold storage).

Bradford City Centre

Virtual Bradford Phase 1 received pump-priming via the EU SCORE programme enabling development of a LoD3 model of the city centre. Using the CityGML Conceptual Model

Figure 1. Landmark building One City Park, shown as architectural concept prior to completion within the Virtual Bradford digital twin environment – Virtual Bradford model supplemented by LOD1 background detail derived from Ordnance Survey mapping/data, Blue Sky tree data, and One City Park BIM model courtesy of Sheppard Robson. This is adjacent to the Grade 1 listed City Hall building, indicating the context of new builds within the historic core

Figure 2. Snippet from the Virtual Twin of Bagamoyo showing 1, the now demolished Fish Market; 2, the historic German Boma; 3, the Old Arab Tea House

Standard, the model is incorporated into routine use-cases for the local authority's Department of Place, to aid data-driven decision making (Wilson 2022). This highlights the importance of both documenting change within the cityscape and potential value of incorporating digital infrastructure and architectural assets into the digital twin at the design phase (Figure 1).

Saltaire

Virtual Bradford Phase 2: The digital data captured as part of the AHRC Place Programme for 'Saltaire: People, Heritage & Place' served as a stimulus for educational needs, including art-based observation of heritage and place that links to identity and belonging, and related digital literacy for Key Stage 1+2 children. A digital interpretation trail was developed for World Heritage Day and consolidated as a legacy resource using QR codes around the village, with examples of the children's artwork showcased alongside further digital content as part of the Saltaire Arts Trail (https://storymaps.arcgis.com/collections/cc20f9b26cbf4a7fb46a94f5f62c83cc)

Bagamoyo, Tanzania

A baseline conservation record was essential for monitoring further fabric change within the historic environment of Bagamoyo, but the digital twin has also helped to anchor a place-based snapshot of intangible heritage relating to craft industries (including activities linked to boat building, Ichumbaki *et al*. 2021), fishing (including the fish-processing market, since demolished), salt production and tourism (Figure 2) (Cooper *et al*. 2022) (https://link.visualisingheritage.org/Bagamoyo).

The digital twin case studies above support a variety of uses within and beyond the communities that inhabit them. It is imperative to understand that the outputs from digital twins are not 'standalone' but require context to imbue significance

within the navigable models. Developments will see the digital models evolve into dynamic digital twins – entirely configurable to predict changes not just to the fabric of the structural assets in city centres, but also aiding data-driven decision-making in managing the wider historic environment.

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The present and future role of urban archaeology in Finland

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Keywords: city, Finland, heritage, town, urban archaeology

Since the late 19th century, practitioners of archaeology have uncovered a wealth of evidence from past centuries, significantly enhancing our knowledge and understanding of various cities and towns in Finland. While urban archaeology is often associated with excavations related to construction and development projects in urban settings, it needs to be highlighted that the field encompasses a broad array of topics, methodologies, and research practices related to urban life and environments both past and present.

Adopting this broader perspective, the aim of urban archaeology is to document and elucidate the multi-layered history and multifaceted structure of cities, as well as the elements of urbanism and urban life in a comprehensive and holistic manner. This includes the historical development of towns and cities up to the present day, as well as analyses of urban features and fabric from different periods. Consequently, urban archaeology is not confined to the study of material remains and evidence found underground but also includes extant structures above ground, such as standing buildings, visible constructions, spatial layouts, urban landscapes, as well as the functions and populations of cities.

In this paper, I discuss the definitions and conceptions of urban archaeology and its role, with a particular focus on Finland. In addition to presenting ideas for more holistic approaches to urban archaeology, I reflect on the limitations of prevailing definitions and the implications of restricting urban archaeological heritage to specific historical periods. When considering the role, importance, and relevance of urban archaeology in the future, it is crucial to ask who determines the scope of urban archaeology and on what basis and why. What actions can and should be taken to alter current conceptions and conditions, if change is deemed necessary and desirable, in order to affirm the role of urban archaeology in future society, including academic research and urban development.

In Finland, urban archaeology is often considered equal to excavations in urban settings (e.g., Niukkanen 2004; Turku 2024). This excavation-focused approach is deeply rooted among the practitioners of archaeology and in academia and is supported by parties working in heritage management defining the scope of protected urban heritage. It has affected how urban archaeology has been and is being taught at the universities and how urban archaeological research has been comprehended both in and beyond the field. Excavation-based approach is also acknowledged and understood by stakeholders and the public, and hence, it has fundamentally affected what kind of role urban archaeology has in the society at large. The role of the field influences its funding and collaborative prospects, ultimately affecting its future significance and position in society.

Finland's current archaeological heritage law, in effect since 1963, does not contain a specific age threshold for protected archaeological sites. While a 100-year age limit applies to stray finds and shipwrecks, protected archaeological layers and remains are designated simply as 'ancient'. Another key criterion for the protection and investigation of archaeological heritage is its 'significance' (Finlex 1963). In practice, however, the terms 'ancient' and 'significant' have been replaced with time-bound thresholds, shaped by those managing heritage conservation and archaeological practices.

In 2000, the Finnish Heritage Agency outlined that the Antiquities Act primarily applies to towns established before the 18th century, protecting urban layers and remains deposited before 1713–1721. This definition (or interpretation) of the Act was made although the act itself remained the same. The Agency emphasized, however, that this time limit is not absolute; protection and research could extend to layers up to the early 19th century in towns founded both before and after 1713–1721 if the site and younger deposits held significant research value (Niukkanen 2004, 7–9, 12, 39; 2009, 23). Since the 2010s, urban excavations have included 19th- and early 20th-century layers, thereby broadening the chronological and thematic scope of urban archaeology (Figure 1. e.g., Seppänen 2018, 37–38; Seppänen, Helamaa & Takala 2021, 76–78; Seppänen & Takala 2022).

In 2023, the Ministry of Culture and Education proposed a new law on archaeological heritage in Finland (*Opetus ja kulttuuriministeriö 2023*). This proposal introduces clear time limits for defining archaeological heritage: in urban areas, archaeological heritage would include layers and remains dating before AD 1721. Thus, under the new law, urban archaeology would be defined by the age of deposition, not by the significance of archaeological evidence.

The trend of restricting urban archaeology to specific timeframes is contrasting with broader, more holistic definitions of the field that have gained traction since the 2010s. According to these definitions, urban archaeology encompasses a wide array of topics, methods, and practices related to urbanism, urban life, and environments, without being limited by time or place (e.g., O'Keeffe 2014, 7520–7522). One of the aims of urban archaeology is to document and explain the multi-layered history and multifaceted structure of cities in a holistic way. A more holistic approach to urban archaeology

Figure 1. The excavations in the city of Lahti in 2013 contained the documentation and studies of the long history of the site from the Middle Ages until the early 20th century (photo © Lahti museums / Lahden museot)

embraces the entire continuum of urban history from medieval to modern and contemporary periods, fostering a comprehensive understanding of cities' multi-layered histories and complex structures. This approach focuses on the development and transformation of cityscapes, processes and patterns of change, and the formation of urban landscapes, emphasizing the connections between different periods, past and present. It avoids segmenting urban history into periods arbitrarily deemed part of urban archaeological heritage or excluded from it. Instead, it promotes a continuous and integrated study of urban evolution, addressing identities, ethnicities, wealth, and class as expressed through planning, architecture, infrastructure, materiality, and patterns of consumption. This holistic and inclusive approach to urban archaeology aims to integrate past and present, fostering a coexistence of historical and contemporary elements and promoting continuity between past, present, and future urban environments (Figure 2).

It is essential to recognize the risks associated with aims to narrow the scope of urban archaeology. As O'Keeffe (2010, 7521) has noted, the social analysis of urban spaces and materiality in urban archaeology has often been driven by studies of modern sites and materials (18th century and later) rather than medieval and early modern urban contexts. Restricting the chronological scope of archaeology risks simultaneously its

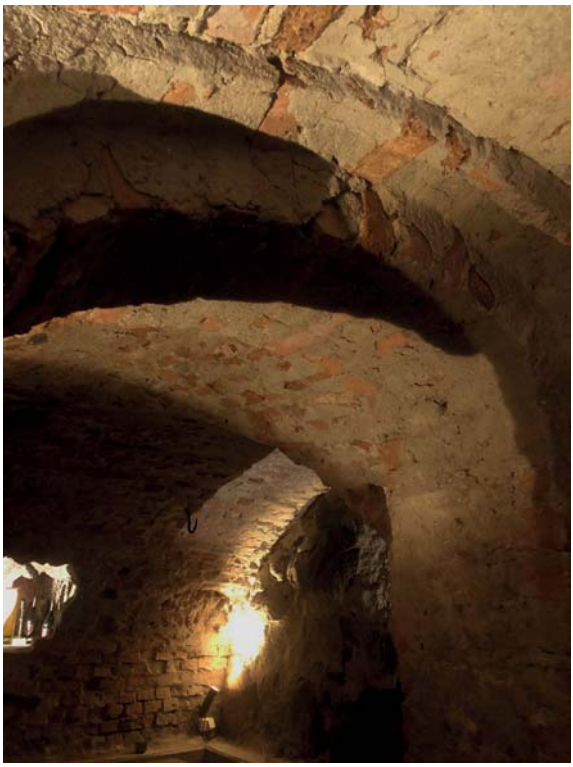

Figure 2. The preserved cellars of the masonry houses from the early modern period in the premises of Tårget restaurant in Turku. If discovered in ruins in excavations, they would have been considered archaeological heritage and documented accordingly. In this condition and location, they have been considered built heritage without archaeological interest. With a holistic approach to urban archaeology these would have been documented and studied as archaeological still standing and functioning features part of today's urban elements and life (photo © Liisa Seppänen)

theoretical, methodological, and analytical progress, potentially undermining long-term research development in the field.

The way urban archaeology is defined, practiced, and understood within heritage management and research influences its status and role in society. The social dimensions of (urban) archaeology encompass the preservation, presentation, and dissemination of archaeological heritage, alongside its roles in education and research, ultimately serving societal benefit, utility, enjoyment, and even entertainment. If urban archaeology is primarily viewed as a development-led, performative act that accumulates materials in archives and collections, it prompts important questions about its societal significance. What role do we envision for urban archaeology in the future to consolidate its position, promote its importance, and justify its meaning for the stakeholders and society?

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Urban archaeology at a crossroads

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Keywords: urban archaeology, urban renewal, archaeological preservation, expectation models, disturbance models

Since the Second World War, archaeological remains in towns have come under increasing pressure. Major construction works have led to considerable degradation of the archaeological record. From the 1970s onwards, there was growing awareness of the vulnerability of archaeology in old towns. Yet it was not until the introduction of the Malta legislation that archaeological research in towns really took off. In the Netherlands, success also has a clear downside. Synthesising research lags behind and research takes on a mainly documentary character. In addition, it is not always very clear where within the 19th- and 20th-century urban extensions archaeology can be expected and what the type of remains are. The effect of the buildings within these extentions on the archaeological record also stayed unclear for a long time. Research by the Cultural Heritage Agency of the Netherlands has provided important insight into this. In conclusion, this article provides an agenda of some of the key challenges ahead in the field of urban archaeology.

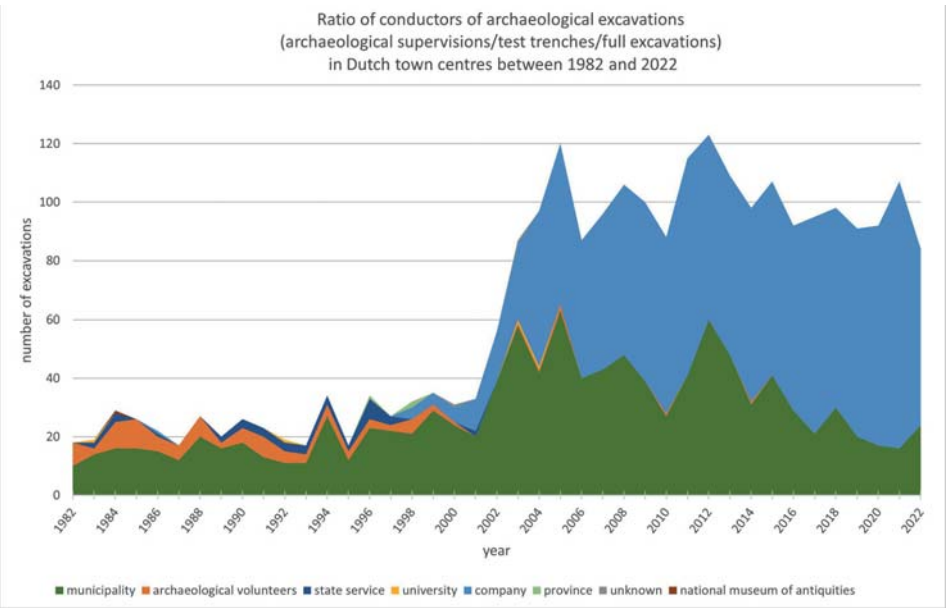
It is impossible to imagine contemporary society without the town. Without going deeply into the question of when a settlement can and may eventually be called a town, it is safe to say that they are central places, nodes in a more widespread political, social, and economic network. These nodes attract people, visitors and also new residents. The growing complexity of urban society also leads to a growth in urban facilities and buildings. All this leaves traces in the soil. Layer after layer, these traces and remains are piled up, sometimes disturbing older underlying layers, right up to the present day. What does differ to the further past is the scale and speed at which the urbanisation process seems to be taking place after World War 2. And with modern building techniques, this palimpsest, the accumulation of remains, vanish at an increasing pace, being replaced by a *tabula rasa*. The past is being cleared away to make way for something entirely new.

In the early 1970s, a study on the erosion of archaeology in towns was conducted under the supervision of Carolyn Heighway (Heighway 1972). This study was soon replicated in other countries, such as Germany and the Netherlands (Fehring 1996; Van Es *et al*. 1982). The results were disconcerting. In large parts of European inner towns, the archaeological record was seriously threatened or had even disappeared. But the

main watershed for urban archaeological preservation, both within and outside the Netherlands, is the European Convention of Valletta (Malta). Due to the underlying principle that archaeological remains should be preserved *in situ* and, if this is not possible, the disturber should take care of *ex situ* preservation (excavation), the number of investigations in towns has also increased significantly. This is also evident from an inventory of the number of research notices of archaeological excavations within the urban contours of 1900 (before the large-scale extensions) (Source: Archis; the results of this survey were presented for the first time in 2023 at the BNA Contact Dagen in Bruges and the EAA Annual Meeting in Belfast).

Until 2001, the number of archaeological excavations in towns in the Netherlands fluctuated between 17 and 35 per year (Figure 1). Most of this research was carried out by municipal archaeological services with a modest share for amateur archaeologists, universities and the State Service (the former Rijksdienst voor het Oudheidkundig Bodemonderzoek (ROB), the predecessor of the RCE). From the late 1990s, archaeological companies also began to play a role in this work, although it was small at first. When the Malta legislation came into force, the number of investigations in towns increased exponentially. It is easy to see that the commercial companies accounted for most of that. Apart from some isolated peaks, it is noticeable that by 2022, the number of excavations by municipal archaeological departments had actually been back to square one, with less than 25 excavations per year. The amateur archaeologists, the

Figure 1. Graph showing the number of excavations in towns between 1982 and 2022 plotted against time and broken down by type of conductor (© J. Bouwmeester, RCE)



state service, and universities that were still conducting limited research in towns until Malta have no longer played any role after 2001.

What does this mean? In any case, it is clear that since Malta, much more archaeological excavations have been carried out in towns within the Netherlands, and precisely in towns that do not have their own archaeological department. It also means that many more different companies and organisations started carrying out research in towns and also within one town. In terms of scientific content, this can lead to differences between towns.

At the same time, the contrast between the significantly increased number of excavations and the number of cross-town boundary synthesising studies is strong. Between 2009 and 2022, 1,399 destructive site exploration projects (trial trenches and excavations) were carried out in towns (Source: Archis). In the same period, a total of nine overarching cross-town boundary synthesising studies, such as dissertations and Harvest for Malta (Oogst voor Malta) projects, were carried out. That is a ratio of one synthesis to 350 excavations! This means that much of the research carried out does not lead to greater insights regarding urban archaeology and urban development at supra-local and national levels.

For new developments, it is important to understand early in the planning process where archaeological remains can be expected, what their value and extent (in absolute terms and in terms of complexity) may be, to what extent the remains are still relatively intact in the ground. In recent years, the Cultural Heritage Agency of the Netherlands (RCE) has developed tools to better understand the areas directly around towns.

By counting and measuring all roads and structures on highly detailed 16th-century urban maps by Jacob van Deventer, it is possible to create a model where these structures could be found. The area around the town can be divided into three zones, namely 0–600 metres, 600–1,300 metres and beyond 1,300 metres (see Bouwmeester 2017) (Figure 2). Here, both the density of structures and also the diversity decreases the further one gets from the town (Bouwmeester 2017; 2021). This is best recognised by the course of the number of farms. It is also notable that wind and water mills, as important economic facilities, were mostly close to the towns. The same also applies to gallows and execution places that marked the towns' jurisdiction (Baas *et al*. 2005, 50).

One can also look at the disturbances caused by buildings and residential quarters as a whole. Especially until the 1960s, clearances for foundations were mainly restricted to a narrow area under and just next to the future wall work and in front of basements. This means that within such buildings, large parts of the subsoil still remained intact (Figure 3). The same applies to foundations on pillars and on piles, especially in areas with weaker soils (Bouwmeester *et al*. 2017, 150, fig. 5).

At the level of town districts, the building density in the first residential areas outside the town walls was still substantial but lower than in the medieval core. A general

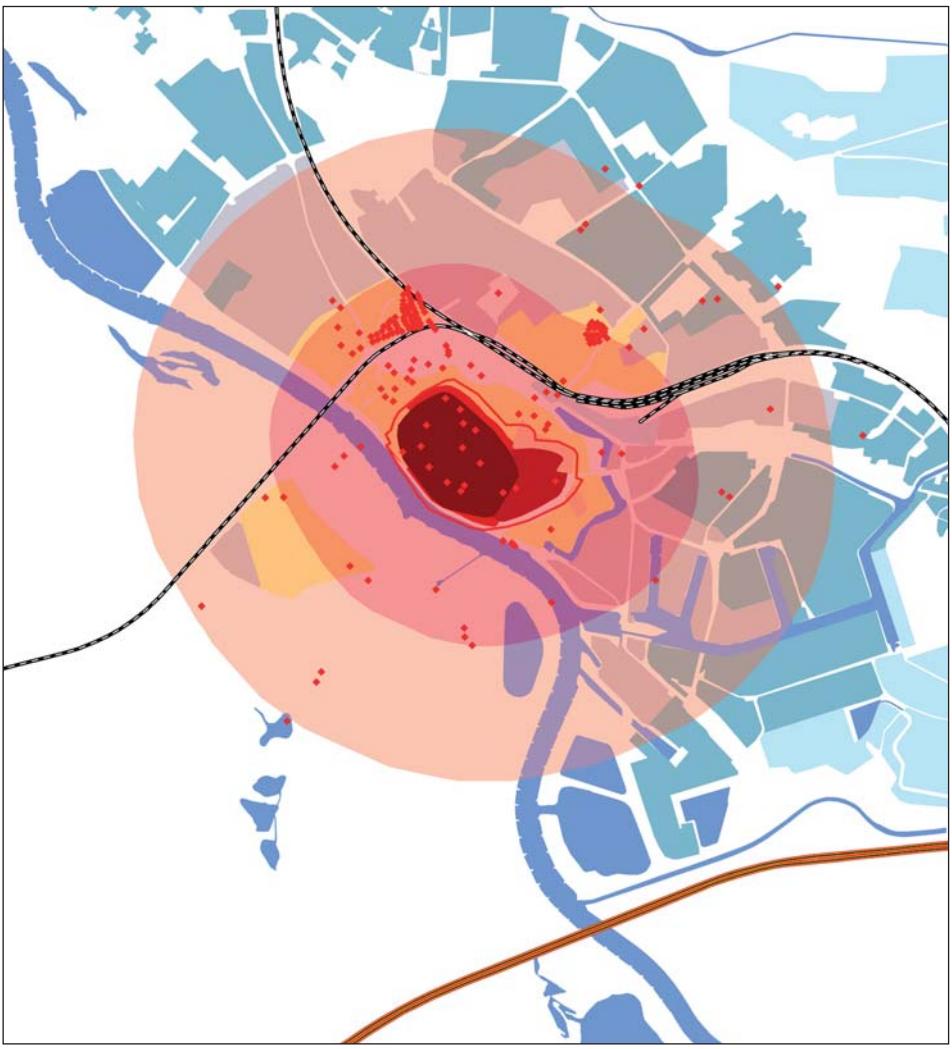


Figure 2. Map of Deventer with the urban extensions, the different zones and in red the location of sites derived from the Jacob van Deventer map (© J. Bouwmeester/M. Kosian, RCE)

trend since then has been to reduce the building density and create more public space in the expansion districts (Figure 4). This includes more green spaces and wider streets.

To conclude, the expectation models combined with the disturbance models clearly indicate that a lot of archaeological information is still hidden under the early urban extensions. This also means that urban renewal projects and infill developments should pay attention to these archaeological sites. Further extending the models

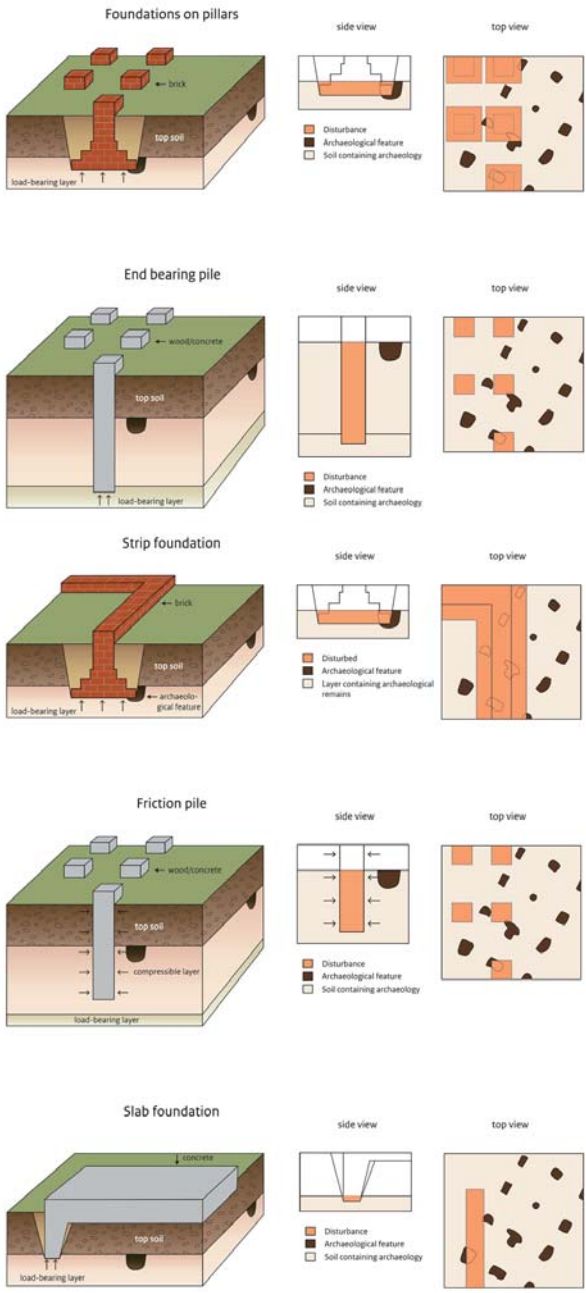


Figure 3. The most common foundations underneath buildings in relation to archaeological traces (Bouwmeester *et al.* 2017, 150)

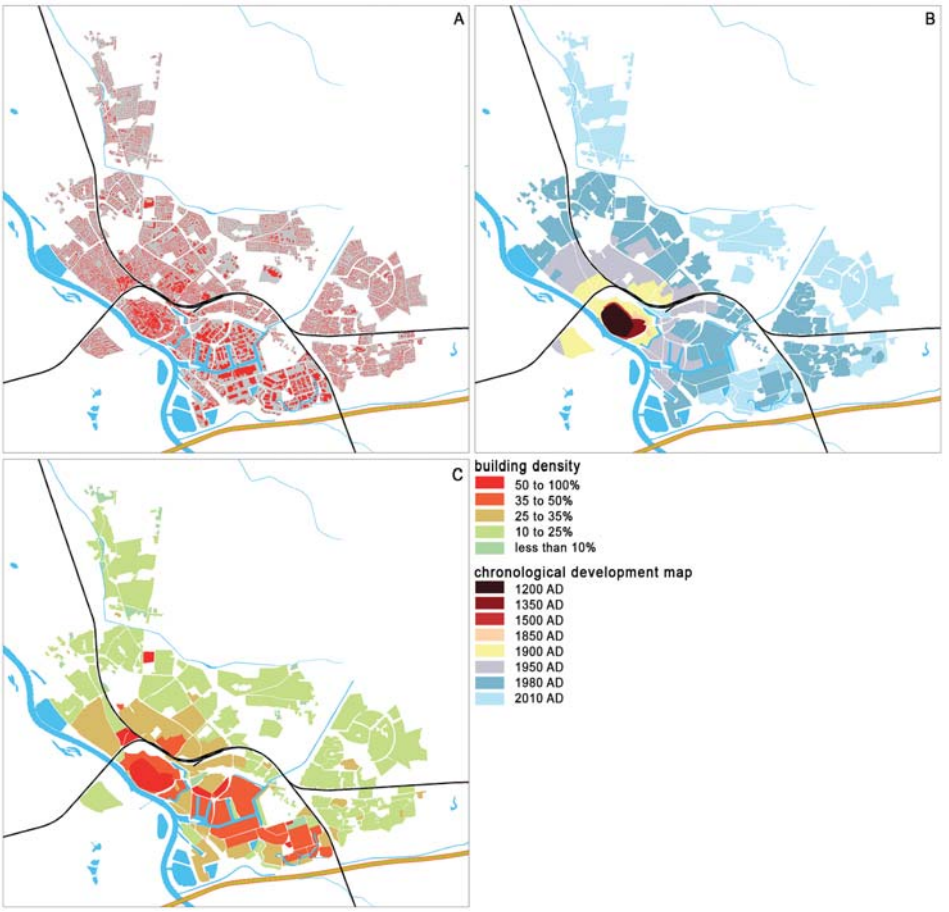


Figure 4. Map of Deventer with (A) buildings (in red), (B) the development of the urban extensions, and (C) with the building density of the different areas (© J. Bouwmeester, RCE/M. Kosian, RCE/M. Haars, BCL Archaeological Support)

by combining the specific structures and buildings with each other and with the underlying landscape can make their location more predictable at local level. New technologies like Artificial Intelligence may play an important role there in the future.

Furthermore, more synthesizing research and academic focus on the town is necessary to take the field a step further in terms of scientific and theoretical content. Knowledge exchange between archaeologists is an important link in this, but the data must also be further elaborated. Attention must also be paid to the large amount of grey literature and data created in the period before the Malta legislation. In any case, the

basic information must be made available so that the right assessments can be made in the future.

Urban archaeology is currently at an important crossroads. If we continue on the same path, a lot more research will be done and reported. Only it will always be with the same comparable questions at the local level. With such an approach, there is no more additional knowledge development but simply documented clearance of archaeology. This violates the principle of ex situ conservation. The dataset is not being used optimally and the upward knowledge spiral is broken. New steps need to be taken to move in a different direction. Steps that the archaeological profession must take together.

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Practical heritage conservation in cities in North Rhine-Westphalia – legal framework and a practical example from the church square of St. Stephanus in Beckum, district of Warendorf (Westphalia)

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Keywords: legal framework, North Rhine-Westphalian Monument Protection Act, archaeological heritage management, excavation, graves, medieval church, St. Stephanus, Beckum, Westphalia, urban development

The regional authorities in North Rhine-Westphalia supervise the legal application of the monument law with a hierarchical structure comprising Supreme, Higher, and Lower Monument Heritage Authorities. The Supreme Monument Heritage Authority forms part of the Ministry for Regional Identity and is responsible for the implementation of the Monument Protection Act. Higher authorities supervise the Lower Monument Heritage Authorities at the municipal level, while urban archaeology units act as executive bodies for these lower authorities in historically significant cities. The current Monument Protection Act, enacted on April 13, 2022, outlines the responsibilities for preserving monuments in the region.

As the example of the excavation at St. Stephanus Church Square in Beckum, Warendorf district, shows, the organization of monument heritage management in North Rhine-Westphalia ensures effective oversight and implementation of the Monument Protection Act. Increased construction activities, particularly related to energy projects, pose challenges to heritage conservation, necessitating improved communication and collaboration among the various authorities and stakeholders. The experiences in Beckum emphasize the importance of balancing urban development with the preservation of cultural heritage by smart, communicative, and persistent heritage management.

Introduction

North Rhine-Westphalia (NRW), one of the sixteen federal states of the Federal Republic of Germany, has a large and diverse urban landscape that extends across both industrial conurbations and rural regions. NRW-archaeology is divided into three parts: Rheinland (LVR-ABR: https://bodendenkmalpflege.lvr.de/de/startseite.html), Westfalen (LWL-AfW: https://www.lwl-archaeologie.de/de/) and the city of Köln (Römisch-Germanisches Museum Köln – Bodendenkmalpflege; https://www.roemisch-germanisches-museum.de). Archaeological investigations in the historic city centres of NRW account for a considerable proportion of practical archaeological heritage management. Constantly ongoing and increasing building activity in the urban landscape puts high pressure on the implementation of archaeological heritage management. It requires much more coordination than a project in a rural environment, not least because of the numerous stakeholders and authorities involved in the process.

The practical example of an urban archaeological project completed in 2024 at the St. Stephanus church square in the town of Beckum, Warendorf district, may illustrate the complex interaction of the authorities and the current structure of archaeological heritage management in NRW (Figure 1; Monument Protection Act (*Denkmalschutzgesetz*) Nordrhein-Westfalen: https://recht.nrw.de/lmi/owa/br_vbl_detail_text?anw_nr=6&vd_id=20423&ver=8&val=20423&sg=0&menu=0&vd_back=N). The excavation in the cities´ centre was carried out by a private enterprise

Figure 1. Aerial view of the church of St. Stephanus in Beckum before renovation. The green lawn is the church square, on the left the market square (© Heimat- und Geschichtsverein Beckum)

and supervised by the 'Department for medieval and modern archaeology' of the LWL-Archaeology for Westphalia (*Fachreferat für Mittelalter- und Neuzeitarchäologie der LWL-Archäologie für Westfalen*) based in Münster (LWL, Mittelalter- und Neuzeitarchäologie - LWL-Archäologie für Westfalen; https://www.lwl-archaeologie.de).

An example of urban archaeology in NRW: the reconstruction of the church square near St. Stephanus in Beckum

The town of Beckum in the district of Warendorf is a medium-sized town with a population of around 37,000 inhabitants. St. Stephanus in the centre of the historic old town is the oldest parish church and registered as an architectural monument; the surrounding church square is listed as archaeological monument.

Excavations in the 1960s had already provided evidence that the first church building of the parish church of St. Stephanus was probably built at the end of 8th century. It is most likely located on the site of a so-called '*Oberhof*' (curtis) as the centre of an extensive Carolingian villication. In any case, Beckum can be described as one of the oldest Christian missionary centres in the Münsterland region after the pagan Saxons were defeated by Charlemagne under their Duke Widukind. The square around the church served as a cemetery from Carolingian times until 1819.

Evaluation of the measure in retrospect

The completion of the conversion work on St. Stephanus Church Square in Beckum marks the end of a planning process that had lasted about ten years (Figure 2). In retrospect, the conflict of interests between urban development and the preservation of archaeological monuments was certainly not unusual but particularly pronounced. In the case described here, this is firstly highlighted by the fact that the substantial urban development subsidy from the state of North Rhine-Westphalia, to the amount of more than €1.2 million, had been approved *before* the final planning and any considerations or even agreements on the preservation of archaeological monuments were discussed. Earlier involvement of the specialised office or other authorities responsible for the preservation of historical monuments in the planning process would have probably made the entire process easier and even faster. The approval of a substantial subsidy for Beckum's church square in 2021 raised high expectations in the local authority for the rapid finalisation of the project without any further conditions. These expectations were dampened in the meantime by the legally required and necessary intervention of the Lower Monument Authority and the specialist authority LWL-AfW in the public interest of the archaeological monument, although the Lower Monument Heritage Authority, as the authorising body, did not fail to recall the aspects of monument law in time. In its statement, the Lower Monument Heritage Authority adopted the advice of the LWL-AfW literally. The co-operation between the specialist department and the lower monument authority can be described as always constructive.

Thanks to the flexibility and willingness to cooperate on the part of the town of Beckum as builder, the reduction of the construction measures proposed by the specialist

Figure 2. The almost completed St. Stephen's Church Square with upgraded substructure and extended paving (© A. Wunschel, LWL-AfW)

Figure 3. Drainage ditch through the church square north of St Stephanus. It cut through numerous stone slab graves (© A. Wunschel, LWL-AfW)

authority was implemented without any major additional expense – it cannot even be ruled out that the minimisation of the ground interventions actually had a cost-saving effect!

The public construction fence exhibition with archaeological-historical content, which the city marketing department realised against the backdrop of Beckum's 800th anniversary in 2024, can be seen as a bonus for the public of the archaeological investigations. It is worth noting that the town of Beckum also put forward ecological arguments in favour of its building project – to the disadvantage of the archaeological monument.

The remodelling of St. Stephanus Church Square can be described as a project in which an appropriate compromise was found between the various public interest concerns through an intensive exchange between the authorities involved, the municipality, the parish, specialists, and citizens. The originally planned serious interventions in the archaeological monument were greatly reduced. Due to trafficability and climatic requirements for drainage, medieval graves in particular had to be documented and removed. They can at least be used as an important source for further research on the history of Beckum (Figure 3).

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Session 2

Asking the Right Question

Taking of bulk samples of fluvial deposits of the late medieval Senne River by the environmental specialists on the site of Parking 58

Environmental archaeology in Brussels (Belgium): the application of a specific protocol

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Keywords: urban archaeology, environmental archaeology, geoarchaeology, archaeobotany, archaeozoology, physical anthropology

Whereas environmental studies are today an important part of urban archaeological research in many towns and cities in Europe, they are often focused on individual sites and, as such, do not always result in larger syntheses. In order to fully exploit the potential of urban environmental studies in Brussels, over the last decades a specific protocol has been developed. It involves the integration of archaeo-environmental expertise – including geoarchaeology, archaeobotany, archaeozoology, and physical anthropology – at different levels: from desktop studies, field observations, sampling, and laboratory work to reporting and synthesis (Devos & Degraeve 2018; Devos *et al*. 2020).

The application of this protocol affects the daily management on all types of archaeological interventions (assessments, follow ups, excavations, etc.). The integration of the archaeo-environmental expertise helps to better assess the potential of threatened zones. The implication of a geoarchaeologist on field during excavations permits to rapidly assess the potential of the site, the integrity and preservation status of the deposits and to decide on further steps: immediate sampling, complementary observations, etc., thus significantly shortening intervention times. Consequently, it also helps archaeologists to come to a better understanding of the often-complex urban stratigraphy. Special attention hereby is paid to the ubiquitous Dark Earth deposits and ancient occupation surfaces, but also to the deciphering of the formation history of specific archaeological features and structures. It is also the geoarchaeologist that will take the samples for the different environmental studies (Figure 1), taking into consideration all aspects of site taphonomy. Secondly, the on-field presence of the physical anthropologist upon the discovery of human remains, permits to perform observations, to collect the bones and to take samples according to the highest standards.

Figure 1. Taking of bulk samples of fluvial deposits of the late medieval Senne River by the environmental specialists on the site of Parking 58 (Brussels, Belgium) (photo © Urban Brussels)

The systematic involvement of environmental specialists during all the phases of the archaeological research (from desktop to synthesis) permits a full integration of a large array of environmental data within the archaeological narrative. Beyond permitting to come to a better understanding of the individual sites, the systematic implementation of environmental studies on all archaeological interventions significantly contributes to our understanding of various aspects of the urban development of Brussels. This has led to a renewed understanding of the early developments and spatial development of the town (Degraeve *et al.* 2010; Devos *et al.* 2011; Vanniewenhuyze *et al.* 2012), but also to a better comprehending of human behavior within the urban setting. Specific attention has hereby been paid to ancient agricultural and horticultural practices (Vrydaghs *et al.* 2015), artisanal activities (Speleers *et al.* accepted), waste management (Devos 2019), and different aspects of lifestyle, such as diet and hygiene (Charruadas *et al.* 2015; Speleers *et al.* 2016; De Cupere *et al.* 2021).

Ultimately, the application of this protocol leads not only to a better understanding of the evolution of the ancient environment but also helps to better place the anthropogenic factor within the landscape and finally to enable larger syntheses.

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GIS tools for urban archaeology in Vienna. Site mapping with different geometries

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Keywords: GIS tool, GIS mapping, location query, the relationship between features, excavation number, *Wien Kulturgut*, Geoportal, Masterportal, urban archaeology, Vienna

Excavations in densely built city centres such as Vienna clearly show the critical role of archaeological and historical research before an excavation starts. Geo-information systems can help process large and complex amounts of data and create accurate forecasts for construction projects.

Vienna's urban archaeology has been using point-based GIS mapping of all known archaeological sites for a long time ('*Wien Kulturgut*'). However, extensive GIS mapping in polygons is advantageous for visualising the extent of the sites. The Vienna City Archaeology Department is currently collaborating with the Federal Monuments Office to implement this approach for Vienna. The impressive vector-based GIS mapping and historical landscape reconstructions compiled by Severin Hohensinner, based on several master theses at BOKU University Vienna, were used as basic data.

The City of Vienna plans to transfer the current online service '*Wien Kulturgut*' to Masterportal this year or next year. In this new Geoportal, point-based GIS mapping combined with excavation results in the form of polylines and polygon-based GIS mapping will serve as a key tool for archaeological research and precise archaeological forecasts in construction projects as well as heritage management and public access.

Introduction

The number of construction projects in Vienna has increased considerably in recent years, driven notably by climate protection measures such as the development of new underground lines and the expansion of district heating and cooling. These large construction projects pose a significant logistical challenge, particularly in densely built city centres. Undertaking excavations in such contexts, characterised by deep

stratigraphy and tight time constraints, underscores the critical role of archaeological and historical research before excavation begins to ensure the quality of results.

Point-based GIS mapping

Large and complex amounts of data must be processed to create accurate forecasts for construction projects. Geo-information systems can help with this. Since 2000 the cultural property register (*Kulturgüterkataster*) has been available online for the public (Börner & Öllerer 1998; Mosser 1998; Liebert & Mosser 2005). A new GIS-based internet portal (*Wien Kulturgut*) was launched in 2008 (Börner *et al*. 2008; Mosser & Krause 2012). It is a point-based GIS mapping of all known archaeological sites based on ViennaGIS, the geographic information system of the City of Vienna.

The basis of the *Wien Kulturgut* is a digital multi-purpose map to which various layers can be added, including the archaeological sites. Each archaeological site is uniquely identified by the excavation number (*Grabungscode'*, comprising the year of discovery and a consecutive number. In the case of the excavation Frankhplatz, this is, for example, '202030'. This code system was introduced in the early 1990s and also serves as the primary key of the associated database. More than 3,000 excavation numbers have been defined in Vienna so far, and around fifty new ones are added every year.

The Internet portal *Wien Kulturgut*, therefore, provides a lot of information but has the disadvantage that it presents no information about the actual size of the archaeologically relevant areas. Extensive GIS mapping in polylines or polygons is advantageous for visualising the extent of sites.

Polyline-based GIS mapping

The second tool is the polyline-based GIS mapping. It is based on the excavation results, which are documented as polyline features using AutoCAD. Thus far, 30,000 polyline features have been located in the GIS tool. Since 2005, the features in Vienna have been measured using a total station in combination with an AutoCAD system. During the measurement, a clearly defined layer name is maintained in the AutoCAD structure. This ensures that the information stored in the system remains easily identified later. The layer name follows strict rules. It consists of the excavation number, the feature number, an abbreviation for the feature type (e.g., 'fm' for a wall foundation), and the period (for example, 'RZ' for Roman Period; e.g., 202030_355_fm_RZ). The next step is transferring the data to the GIS tool.

Polygon-based GIS mapping

The third tool is polygon-based GIS mapping. Mapping in polygons is a very advantageous way of visualising sites to the largest possible extent. The Archaeology Department of the City of Vienna is currently working on this project in cooperation with the Federal Monuments Office. The impressive vector-based GIS mapping and historical landscape reconstructions compiled by Severin Hohensinner, based on

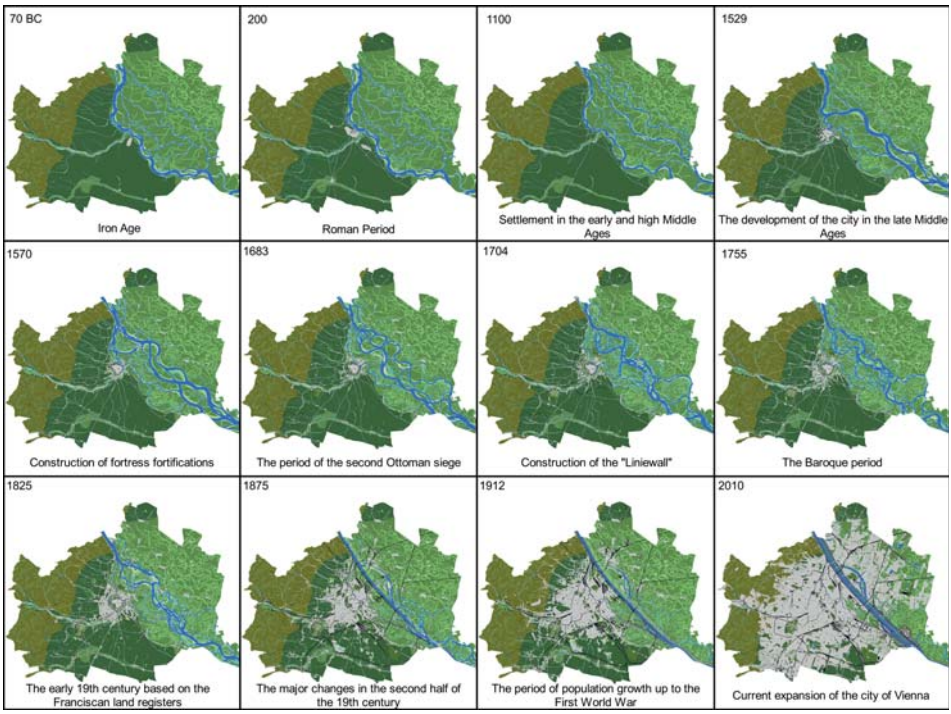

Figure 1. Vector-based GIS mapping and historical landscape reconstructions (© Severin Hohensinner *et al.*, BOKU University Vienna, and Wien Museum)

several master theses at BOKU University Vienna, were used as basic data. These maps, recently completed on behalf of the Wien Museum, show the historical landscape and settlement development of Vienna in thirteen historical periods from the late Iron Age, the Roman Period, and the Middle Ages through the second Ottoman Siege and the 18th and 19th centuries up to the present day (Figure 1). Attributes were added in accordance with the specifications of the Federal Monuments Office. This nomenclature allows object-related but also temporal queries.

Links between the tools

All three features are connected. The point features and the polyline features are related via the excavation number. The polygon features are related to the point and polyline features via the location query (Figure 2). The GIS tool connects different kinds of data to a map, integrating location data with several types of visual data and descriptive information.

For instance, when analysing an excavation, the GIS tool identifies in which polygones the features are located with the help of a location query. Using again the example

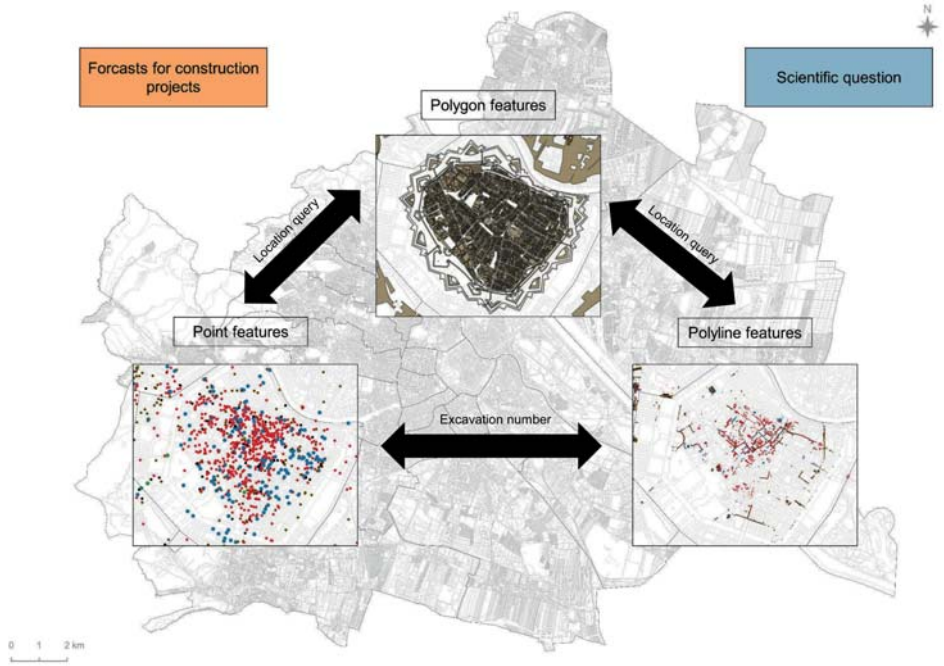

Figure 2. The polygon features are linked to the point features and the polyline features via the location query (© Stadtarchäologie Wien)

Frankhplatz, the features are located in the Roman *canabae legionis*, the medieval suburb in front of the Schottentor and the modern suburb of the so-called Alservorstadt (Figure 3).

The new Geoportal

The City of Vienna plans to transfer the current online service, *Wien Kulturgut*, to Geoportal this year or next. The new Geoportal is based on the Masterportal web application. Masterportal is an open-source geoportal; it uses OGC standards and is primarily based on vector data. The new polygon features will be integrated into this new Geoportal and accessible online.

In the new Geoportal, point-based GIS mapping combined with excavation results in the form of polylines and polygon-based GIS mapping will serve as a key tool for archaeological research and precise archaeological forecasts in construction projects as well as heritage management and public access.

Figure 3. Location of features from the Roman Period to modern times in the excavation area at Frankhplatz (© Stadtarchäologie Wien)

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Significance in the suburbs. Grasping the 'monument syntax' of a Roman town for developers and heritage managers alike (*Brigantium*/Bregenz, Austria)

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Keywords: urban Roman heritage, digitization, significance assessment, significance attribution, monument protection

At the westernmost tip of Austria, the edge of the Central Alps, and on the shores of Lake Constance lies the modern city of Bregenz. A multi-phased Roman military installation was founded there in late Augustan times (most recently: Kopf & Oberhofer 2022). In the later 1st century AD and well into the 3rd century AD, the civilian town of *Brigantium*, including a forum, temples, baths and other public buildings, flourished on the so-called Ölrain plateau (most recently: Oberhofer 2019; Rabitsch 2019). Since the late 19th century, this area has been continuously developed with *villas* and gardens that have themselves become a remarkable townscape worth protecting. Since there has never been any medieval or early modern construction in the area, the state of archaeological preservation in some parts is outstanding.

The question may be raised: What significance do mid-level provincial Roman settlements have, not only as testimonies of an empire but also as elements of local history and modern town planning? The processes of addressing and assessing the significance of archaeological heritage have been much discussed within the EAC's working group (EAC 2024) and at the Austrian Federal Monuments Authority's Department of Archaeology (Hebert *et al.* 2021). However, before we answer questions of 'monument semantics', we must first ask what the archaeological monument actually 'is' and what physical remains actually exist or can at least be expected underground. Continuing the use of linguistic analogies, a kind of 'monument syntax' needs to be ascertained as a basis for the attribution of 'meaning'.

In the last decade, one of the most successful strategies for the change management of archaeological heritage in Bregenz has been the establishment of 'Archaeological Finds Zones' and a digital map of Roman Period structures (Figure 1, Oberhofer *et al.* 2016). Beginning in 2016, a project was carried out to digitize all existing hand-drawn plans dating from the 1860s to the 1990s, thus producing a 2D GIS georeferenced

Figure 1. Digitized Roman 'city map' of *Brigantium* (source: areal image: State of Vorarlberg, archaeological data: Vorarlberg Museum and Federal Monuments Authority)

'city map' of *Brigantium*. This dataset has become a valuable tool for researchers and heritage managers alike (https://webcity.bregenz.at/WebOffice/synserver?project=stadtplan&client=flex).

However, the stratigraphy (up to 3 metres deep along the main road) and the multi-dimensional nature of these structures led us to look beyond the archaeological *site* and grasp the *monument* and the significance it conveys. The attempt was undertaken to produce an abstract visualization of *Brigantium*'s horizontal *and* vertical expanse, i.e. the depth (or 'thickness') of its stratigraphy (Figure 2, Oberhofer & Picker 2022). It may be argued that only the combined assemblage of excavated architecture, preserved stratigraphy, and the meaning attached make up the monument's significance.

While the legal process of monument protection in Austria emphasizes the aspects of 'significance' and 'meaning' as qualitative values, the 'material turn' in general and (possibly even more so) the technical advances (especially GIS, surveying methods, etc.) on an everyday level have increased our perception of archaeological sites and

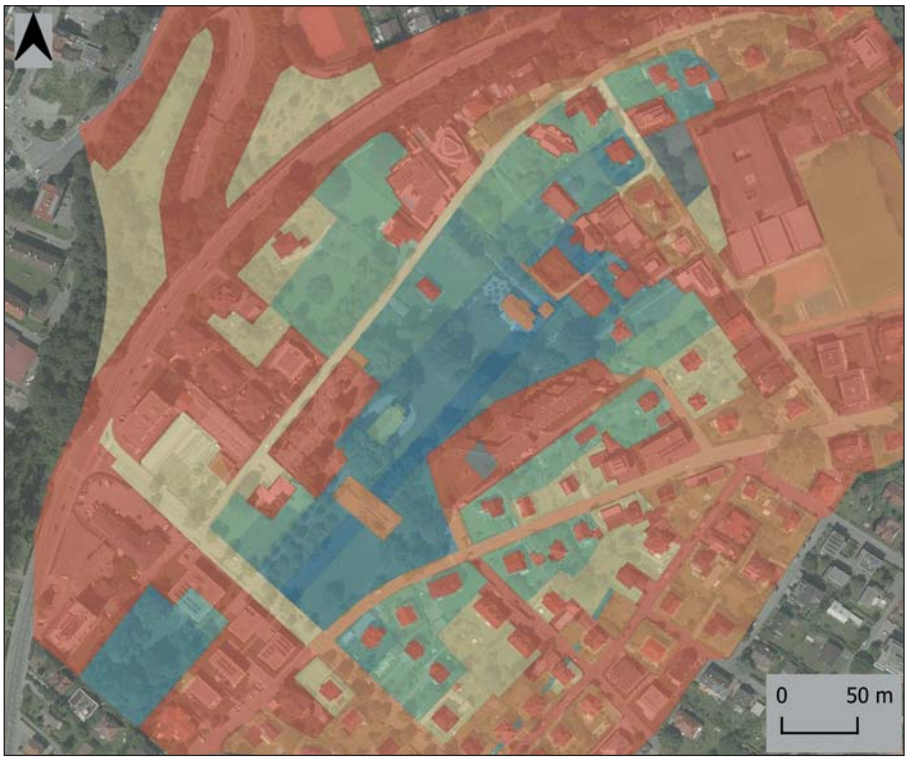

Figure 2. Areas of varying depth of known or expected archaeological strata in Bregenz, from approx. 3 m (dark blue) to none (red) (source: A. Picker; areal image: State of Vorarlberg)

Figure 3. Areas covered by historic excavation plans of *Brigantium* (now digitized), illustrating the density and quality of evidence (source: A. Picker; plans: Vorarlberg Museum)

monuments as spatial entities. The mapping and visualization of not only findings and features but also of aspects like preservation potential and even source criticism and research objectives (Figure 3) may lead to a more transparent and comprehendible qualitative assessment of monuments in general.

Whether we speak of networks, assemblages, or syntaxes, it is imperative to grasp the structure of archaeological monuments as 'things' that are more than representational (for an overview, see Witmore 2014, Jervis 2019). A preserved monument, especially, has the capability to convey future, yet unknown meanings based on a preserved and transmitted material heritage. In modern urban contexts, this will promise to have a positive impact on planning and the identities attached to being 'urban'.

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Session 3

Delivering the Goods

Media conference with Beat Jans, then President of the Government of the Canton of Basel-Stadt and now Federal Councilor of Switzerland, and a pop-up exhibition on the Night of Museums in 2023, presenting early medieval finds from graves excavated during the expansion of the district heating network in 2021/2022

Archaeology in the changing townscape: the case of the Centre region in France

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After a period of urban development in the historic town centres between the 1970s and the 1980s, which resulted in the destruction of many archaeological sites, archaeology has gone from being perceived and experienced as a purely unwanted obligation to being an integral part of town planning and development.

The growing awareness of the environmental and social challenges posed by urban sprawl, vehicle traffic, and climate change has started to modify our vision of the town and how it should be developed. One of the consequences has been a marked increase in the density of the urban fabric and the renewal of old town centres, encouraged by governmental projects designed to improve their appeal. This paper aims to retrace these evolutions through the example of the Centre region of France, with particular attention paid to Chartres. Through the respective and complementary actions of the State authorities (Ministry of Culture) and the archaeology services belonging to local government authorities (departments and municipalities), this paper aims to illustrate the role of archaeology in the urban environment as a means of action for local decision-makers and as a factor which can add a high cultural value to local areas through building and strengthening local identities and promoting a scientific and heritage culture.

Introduction

With an emphasis on the particular case of Chartres, this paper will give a little more understanding of the historical context and the regulatory framework that governs urban archaeology in this region. The comparison within a broader European context sheds a sometimes harsh light on the strengths and limits of the policies and practices of archaeological excavation and resource management in the Centre region of France.

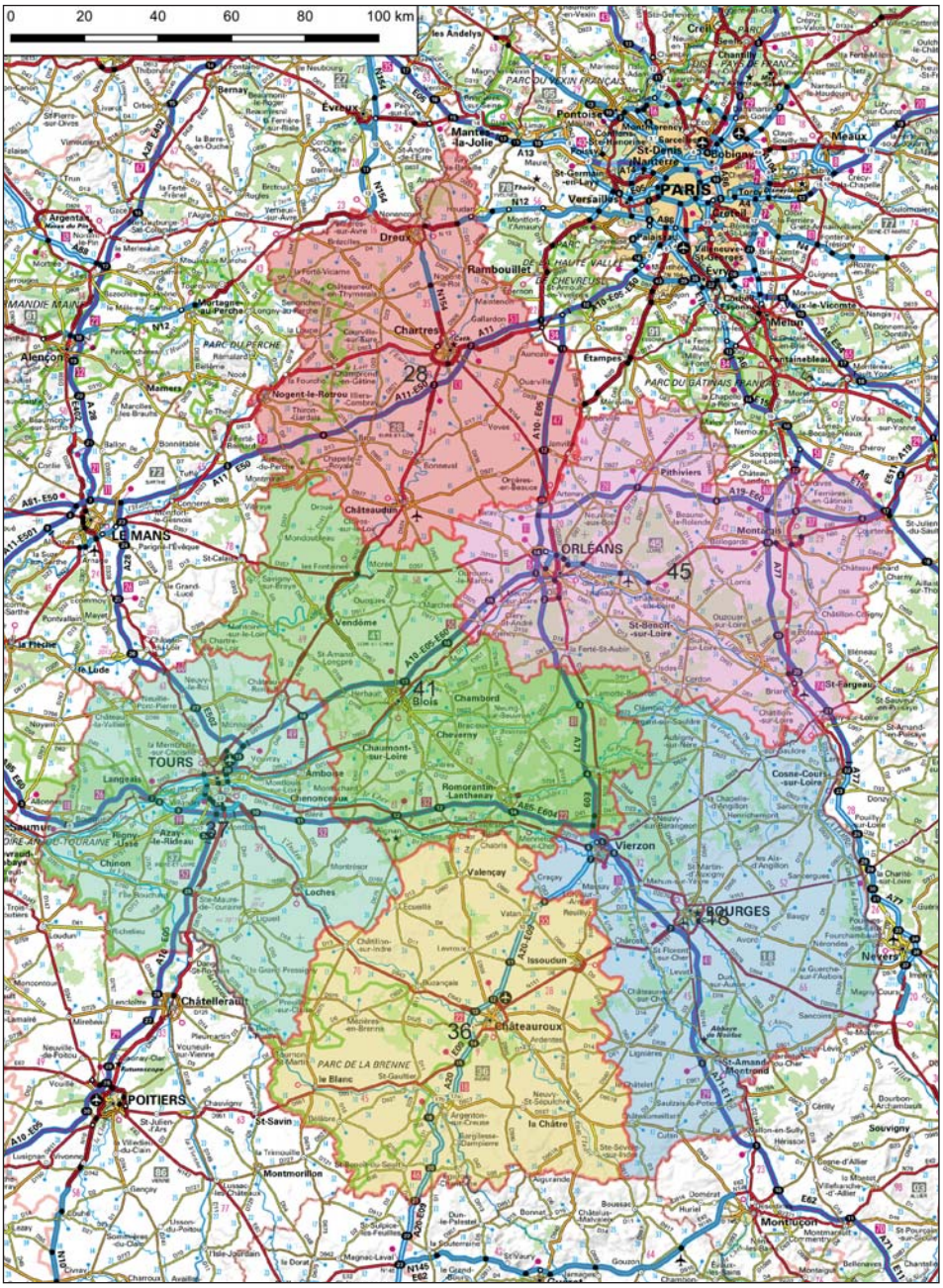

Figure 1. Map of the Centre Val-de-Loire region with the six departments

Department	Capital	Surface area (km²)	Population in 2023 (population in the capital)	Population density (habitants / km²)
18 – Cher	Bourges	7 235	299 600 (63 700)	41.41
28 – Eure-et-Loir	Chartres	5 880	431 400 (136 830)	73.37
36 – Indre	Châteauroux	6 791	217 300 (43 740)	32
37 – Indre-et-Loire	Tours	6 127	612 200 (137 660)	99.92
41 – Loir-et-Cher	Blois	6 343	328 500 (46 800)	51.79
45 – Loiret	Orléans	6 775	684 600 (117 000)	101.05
	TOTAL :	**39 151**	**2 573 600**	

Figure 2. The population of the Centre Val-de-Loire region by department

The Centre-Val de Loire region (CVDL)

After the territorial reform of 2016, the newly named Centre-Val de Loire is an average-sized region with an area of 39,151 km² and a population of 2.57 million people. It displays a great disparity in terms of population distribution and economic activity with the preponderance of the northern part of the territory, strongly influenced by the proximity of Paris and its suburbs, the Loire Valley and a dense network of motorways (Figures 1 & 2).

The central government is represented in each of the six departments by a departmental prefect whose services implement government policy. The regional prefect represents the prime minister and each ministry whose services have been 'de-concentrated' (but not decentralised) at the regional level, based in Orléans, the regional capital. It is interesting to observe that whilst the departmental and regional echelons represent central government, the role played by the departmental prefectural services in promoting the economic development of the territories within their department can lead to tensions with the central governmental services at the regional level.

Heritage management between the state and local government

The general framework governing archaeological heritage management, excavation work and research is administrated by the Ministry of Culture, represented by the *Direction Régionale des Affaires Culturelles* (DRAC), under the authority of the regional prefect. The ministry is responsible for implementing and coordinating the state's cultural policy regarding heritage, museums, the visual and performing Arts, and cultural and artistic education. DRAC provides financial assistance through subsidies and grants as well as guidance and expertise for cultural institutions in local authorities and the private sector.

Heritage management concerns the architectural heritage in general, of which Grade 1 and 2 listed buildings, archaeology, archives, and the curation of museum collections of all types. The architectural heritage and historic monuments are managed

by the *Conservation Régionale des Monuments Historiques* (CRMH) and the *Unités Départementales d'Architecture et du Patrimoine* (UDAP), the latter being responsible for the maintenance of listed buildings and the implementation of town planning regulation in protected heritage areas. Outside of these areas, building permits are granted by the local authority planning departments. The *Service Régional de l'Archéologie* (SRA) is tasked with the implementation of the law and government policy concerning archaeological heritage. This mission includes the maintenance of the Sites and Monuments Register (SMR), the promotion of archaeological research through aids to research projects and publications, the scientific evaluation of archaeological activity in the region, and the preservation of the archaeological resource. With the massive increase in urban and rural development since the 1990s and the effects of the laws of 2001 and 2002, this has become the single most important activity of the SRA.

Development projects undergo a desk-based assessment by the SRA in order to determine the potential impact on the archaeological resource and implement the appropriate conservation measures. With a particularly medical tone, the first step in the process is the prescription of a *diagnostic* designed to detect and characterise any archaeological remains present within the perimeter of the project. The diagnostic may be carried out by a territorial archaeological service if one is present or by the national operator, the *Institut National des Recherches Archéologiques Préventives* (INRAP). Depending on the results of the diagnostic, detailed in a report which has to meet a certain number of criteria, the SRA must decide whether the remains are sufficiently important and/or well-preserved to justify further conservation measures: preservation *in situ* through the modification of the development project (freezing the site or mitigation strategies), or by due recording during excavation. In the first case, after a discussion with the developer, the SRA lays out the material conditions for the protection of the remains. In the second case, the SRA prescribes an excavation (*fouille préventive*) of which the objectives and the methodological principles are detailed in the brief attached to the decision (*arrêté*) signed by the regional prefect. In both cases, the conservation measures and the brief are examined by an independent scientific committee, the *Commission Territoriale de la Recherche Archéologique* (CTRA), which meets ten times yearly.

A well-endowed region – origins and development of the territorial archaeological units

The Centre Val-de-Loire region boasts six local authority archaeological units (Figure 3), of which three are departmental services, and three are attached to a municipality such as Orléans or an urban community such as Chartres Metropole (66 communes) and Bourges+ (17 communes). These were major historical towns of the region already during the Roman and medieval periods, and all three have been proven to have late Iron Age origins. Tours should also belong to this list but represent a strange anomaly with regard to archaeology (see below). The departmental services were created between 2005 and 2008 as a means of maintaining a certain control over the costs and schedules of archaeological excavations related to development projects carried out by the relevant local authority.

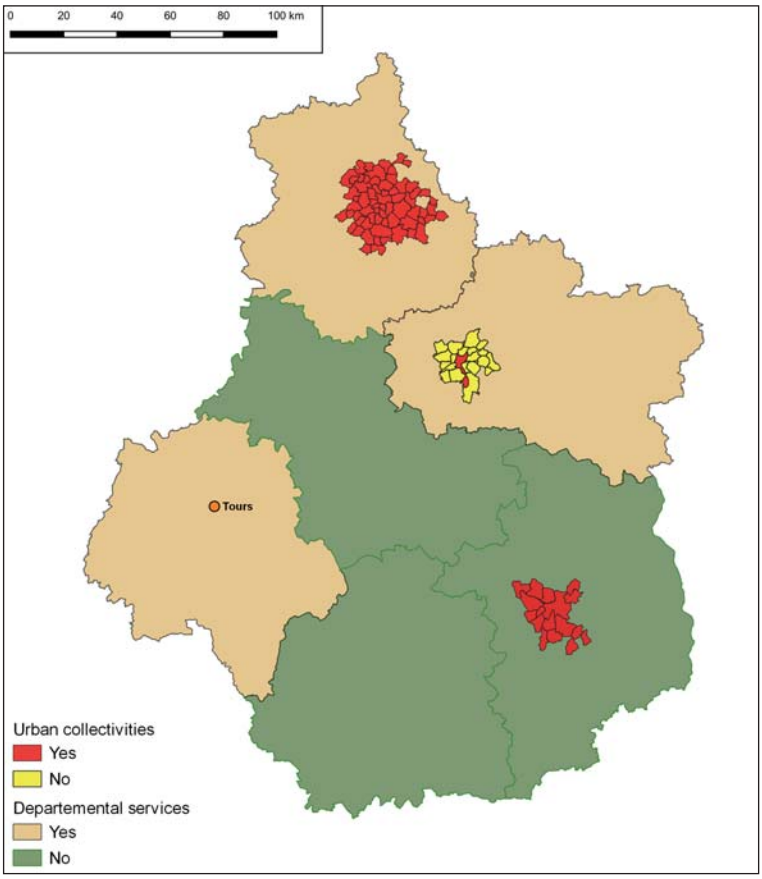

Figure 3. Map of the Centre Val-de-Loire region with the territorial archaeological units

Municipal archaeological services have a longer history, and in all three cases, their origins can be traced back to the scholars, engineers, and learned societies of the mid-19th century.

For the Centre region, the early period of urban development in historic town centres between the 1970s and the 1980s was marked by an absence of any real policy in heritage management and appropriate structures to carry out rescue excavation. Up until this date, urban excavation was largely research-based and carried out by local archaeological societies or university teams. For Chartres, the Roman and Iron Age sites of rue Saint-Thérèse à Chartres illustrate this situation. Excavated using the Wheeler method by Pierre Courbin between 1967 and 1972, the sites were taken on by the *Groupe de Recherche Archéologique de Chartres* (GRAC) up until 1976.

The absence of permanent structures with adequate finances led to the destruction of many archaeological sites during this period. The ensuing public scandals caused by these losses led to an increased awareness of the value of archaeological and architectural heritage and, thus, to an improvement in the attitudes to archaeological remains by developers and public authorities. The existing legal framework with centralised, state-funded excavations was rapidly overwhelmed by the sheer volume of activity. One of the answers to this situation was the creation of the *Association des Fouilles Archéologiques Nationales* (AFAN) in 1973 to carry out rescue excavation at the request of the state. This was, in reality, the first step towards the necessary professionalisation of archaeology, though also to the detriment of the associative framework, which allowed the public to participate in the discovery and conservation of their own heritage.

In the case of Chartres, Dominique Joly became the first municipal archaeologist in 1975 with the creation in 1978 of the *Association pour la Défense de l'Archéologie Urbaine* à Chartres (ADAUC) to meet the needs of the first developer-funded excavations. Throughout the 1980s, Chartres, Orléans and Bourges were the laboratories for developing contemporary archaeological excavation and recording methods. Between 1989 and 1992, the AFAN and the ADAUC jointly carried out two major excavations of the cemetery of Saint-Chéron and the esplanade of the cathedral.

A watershed moment – the changes in the laws of 2001 and 2003

The year 2001 marked a turning point for the territorial archaeological units with a major change in the laws and procedures governing developer-funded excavation. The new law gave a clear legal and financial framework which obliged developers to pay for archaeological work and transformed the AFAN into INRAP, a quango under the joint tutelage of the Ministry of Culture and the Ministry for Scientific Research. It should be noted that the latter has been largely absent in terms of financial and scientific support, leaving the Ministry of Culture as the sole supporter of the Institute.

Initial archaeological evaluation work (*diagnostic*) was to be carried out by INRAP and financed by a fee (*redevance*) based on the surface area of the development project. Any subsequent rescue excavations were to be paid for by the developer. It should be noted that the law excluded local authority archaeological services from the system, instating a *de facto* monopoly for INRAP. It was modified in 2002 to bring rescue excavations into the commercial sector. Henceforth, INRAP, local authority units, and private operators with the required accreditation could put in competitive tenders for excavation work. The other major change was that territorial excavation units could now carry out diagnostics in the same way as INRAP, even having priority over the national operator for sites in their own territory. They also received a subsidy from the *redevance* based on the surface area and the type of stratigraphy present. The method used to calculate the subsidy had several shortcomings, which failed to properly compensate the real costs of stratified urban sites and induced a threshold effect that made rural evaluations 'unprofitable' over a certain surface area. The parameters have been recently changed to address these issues, albeit partially.

The new law, therefore, gave an increased role to the local authority units, enabling them to develop a stronger permanent team with a high level of activity. This was particularly visible with Chartres, which benefits from very strong political support by the municipality and the urban community. The ADAUC became the *Service Municipal d'Archéologie* in 2001 with a team of seven permanent staff members in 2003. This rose to 87 in 2005, with the first 100% 'in-house' excavation of the 'Cinéma' site in 2005, and reached a peak of a hundred personnel in 2006. The service stabilised at around forty permanent staff in 2014, whilst their territory was expanded to cover all 66 communes of the urban community of Chartres in 2018.

The evolution of the legislation was partly triggered by the changes in development policy. After a period of large-scale redevelopment of historic town centres, development tended to shift towards the outskirts of urban centres with the creation of housing and industrial estates and large infrastructure projects. For Chartres and its surrounding area, this shift can be seen in the map of archaeological operations carried out after 2002 and notably between 2002–2017 and 2018. With the growing importance of developer-funded excavations, this tendency changed the aims of archaeological research, at least for the national operator. With a focus on large-scale excavations over extended territories, excavation and recording methods changed, often with a loss of know-how in the approach to highly stratified sites as practitioners progressively left excavation work or moved to territorial or private operators. However, the municipal archaeological units were able to maintain a certain level of activity within the historical urban environment, thus preserving their *savoir-faire*.

The growing awareness of the environmental and social challenges posed by urban sprawl, vehicle traffic, and climate change has started to modify our vision of the town and how it should be developed. One of the consequences has been a marked increase in the density of the urban fabric and the renewal of old town centres, encouraged by governmental projects designed to improve their appeal. This tendency is set to continue for the foreseeable future since the *Zéro artificialisation nette* (ZAN) law was passed on 20 July 2023, which aims to stop completely any development of new land by 2050, with a reduction of 50% of greenfield developments by 2031 as an intermediary goal.

This overall trend can be seen in the major towns of the Centre region, though there is still a certain tension between the urban centres and their suburbs. Overspill from the Paris region and the dense motorway network mean that development activity is still set to remain at a high level on the outskirts of the agglomerations. At the same time, building activity within the town centre and its immediate suburbs has increased over the last few years, particularly since the Covid crisis. For Chartres, this situation is likely set to persist over the next few years with the planned extension of the industrial estates east of the town and other major projects in the pipeline. However, this prognostic will certainly evolve since the number of building permits received by the SRA this year seems to have diminished, possibly linked to an apparent downturn or at least a stabilisation of the property market. Nevertheless, the archaeological service has maintained a high level of activity since 2021 and still has to adapt to the different methods and approaches needed by large open-area excavation while maintaining

and developing those specific to a deep and dense stratigraphy in a complex urban environment.

Archaeology in the town and its surroundings – a factor for the attractiveness of the territory

At a regional level, the figures concerning the number of operations carried out by the territorial units (Figures 4 & 5) clearly show that these bodies play a key role in the archaeological landscape with several advantages for the local authorities. By taking on evaluation and excavation work, they are able to meet deadlines that would be impossible for the national operator whilst also minimising overall costs due to a largely in-house management of resources. By giving a clearer vision of delays and costs to potential developers, they are a positive factor in maintaining the economic attractiveness of the territory. For infrastructure projects led by the municipality or the urban community, the archaeological service plays an important advisory role at the earliest possible stage of any development project by integrating archaeological work into the overall project schedule. This also applies to projects led by private developers, where the territorial unit may act to facilitate the contacts with the SRA. Through their respective and complementary actions, archaeology has gone from being perceived and experienced as a purely unwanted obligation to being an integral part of town planning and development. Its role in the urban environment is particularly evident since it can be an advantage for local decision-makers by facilitating the planning process and development projects.

Archaeology and the changing town – who impacts who?

The integration of archaeological remains into urban development projects still remains fairly marginal, generally limited to heritage management projects specifically aimed at presenting remains to the public in the context of a museum, a visitor centre, or the archaeological 'crypts' under the floors of several major churches such as the cathedrals of Bourges, Chartres, and Orléans. With regards to sites discovered in the context of urban development projects, the integration of remains into the final 'product' is very rare, limited to well-preserved or spectacular masonry constructions. The most obvious examples are the elements of urban defences, such as the bastion of the Place des Epars in the underground car park at Chartres. In most cases, the remains are either excavated and thus destroyed or preserved, with varying degrees of success, through mitigation strategies. These generally consist of limiting the depth of the constructions and limiting the number or changing the disposition of foundations to limit the overall impact.

Above ground, architectural heritage may benefit from a range of protections, whilst the urban fabric may be preserved for small-scale developments, simply because the forms of certain Roman Period monuments and a high proportion of medieval property limits are still fossilised in the land registry (cadastre). However, the tendency to increase urban density goes against this by encouraging the amalgamation of plots for larger and taller buildings. While historical architectural heritage benefits from the protection offered by a certain number of legal frameworks, preserving buried remains

Dept.	Operator	2018	2019	2020	2021	2022	2023	Total operator
18	Bourges +	5	9	6	9	5	7	41
18	Inrap	4	6	9	8	8	8	43
28	**CD 28**	**6**	**6**	**4**	**5**	**6**	**6**	**33**
28	**Chartres**	**4**	**8**	**5**	**18**	**16**	**11**	**62**
28	**Inrap**	**10**	**16**	**15**	**10**	**10**	**12**	**73**
36	Inrap	12	11	11	13	14	12	73
37	CD 37	4	4	7	12	9	14	50
37	Inrap	20	40	15	17	13	21	126
41	Inrap	18	34	22	35	29	21	159
45	CD 45	15	14	2	2	6	1	40
45	Orléans	8	5	3	5	11	5	37
45	Inrap	9	16	12	20	18	18	93
Total region		***115***	***169***	***111***	***154***	***145***	***136***	***830***

Archaeological *diagnostics* carried out by in the region by number of operations per operator
(white = Inrap, light pink = departmental archaeological service, dark pink = urban community)

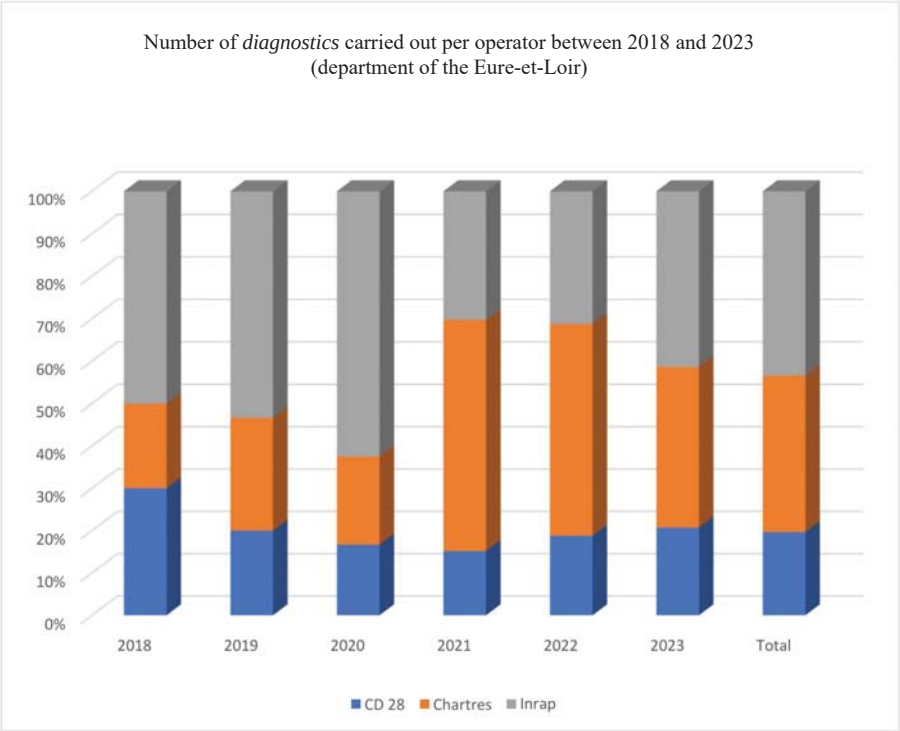

Figure 4. The chart resumes the number of archaeological evaluations (*diagnostic*) carried out by the public operators in the Centre Val-de-Loire region between 2018 and 2023. The graph represents the proportion of these operations taken on by the territorial units and the national operator in the department of the Eure-et-Loir (data SRA, DRAC Centre Val-de-Loire)

Dept.	Operator	2018	2019	2020	2021	2022	2023	Total
18	Bourges +	10,2	39,7	31,7	15	13	9	118,6
18	Inrap	*40*	*46*	*53*	*10*	*91*	*52,28*	*292,48*
28	CD 28	17	45,8	24,8	89	66	30,16	272,76
28	Chartres	1	4,7	1,5	10	36	20,85	74,05
28	Inrap	*87*	*171*	*76*	*73*	*61*	*40,03*	*508,13*
36	Inrap	*36*	*38*	*24*	*57*	*70*	*68,33*	*293,03*
37	CD 37	32,6	44,8	32,9	42	61	55,46	268,76
37	Inrap	*143*	*174*	*34*	*81*	*68*	*115,96*	*616,06*
41	Inrap	*31*	*65*	*50*	*27*	*68*	*44,55*	*284,55*
45	CD 45	79,9	54,4	17,5	7	58	1	217,8
45	Orléans	2,4	1	1	5	3	19,51	31,91
45	Inrap	*39*	*131*	*22*	*90*	*28*	*127,87*	*437,47*
Total region		***519***	***814***	***369***	***506***	***623***	***585,00***	***3 415,60***

Archaeological *diagnostics* carried out by in the region per operator, in terms of number of hectares (white = Inrap, light pink = departmental archaeological service, dark pink = urban community)

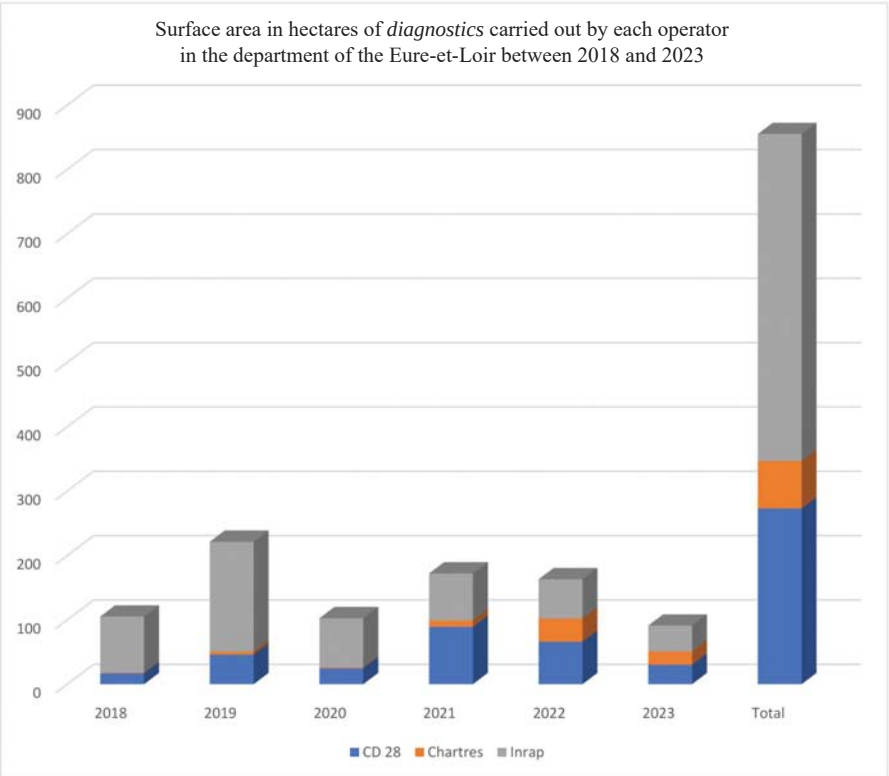

Figure 5. The chart resumes the surface areas in hectares of the archaeological evaluations (*diagnostic*) carried out by the public operators in the Centre Val-de-Loire region between 2018 and 2023. The graph represents the proportion of these operations taken on by the territorial units and the national operator (data: SRA, DRAC Centre Val-de-Loire)

depends primarily on their economic impact on the development project. This raises the question of the real effectiveness of a highly prescriptive approach to town planning and building regulation. Whilst the urban communities play a primary role in planning the overall organisation of the urban environment and its infrastructures, much of the initiative of its materialisation is left to property developers. In this situation, the role of archaeology is reactive, responding to the external forces of urban development with a fairly limited impact on the overall policy.

A long-term scientific approach to the field

In a more active role, archaeology is a major force in developing public awareness of the value of the archaeological heritage that has helped to shape the environment in which people live. The progress accomplished in this matter is the result of a long-term and permanent presence of territorial archaeological units and their research and outreach activities. It is worth taking a look at some aspects of these to appreciate the multi-faceted roles that archaeology fulfils.

The Sites and Monuments Register, an essential tool for heritage management

France was among the first European countries to have a national SMR database with SIGAL, which became 'Dracar' in 1978 when the ministry created databases for museum collections, archives, and architectural heritage. In 2002, Dracar migrated to the current system (Patriarche), which runs under Oracle and was linked to the ArcView and then the ArcGIS program. A new version was delivered in 2005 (Fromentin, Lauzanne & Ropars 2006; Chaillou & Thomas 2007). Its four modules allowed the creation of entries linked to geometries (point, polyline, polygon) for archaeological entities, perimeters of protected sites or areas, archaeological operations, and documentary sources. Initially, Patriarche was run by dedicated staff in each SRA, which ensured regular and consistent data entry. However, the increasing weight of rescue led to a gradual transfer of the SMR's maintenance from the dedicated teams to the individual agents already tasked with the management of their department, and the system also suffered from a lack of investment in the associated data management tools, partly due to the centralised control of the system. Despite its shortcomings, the current environment of Patriarche remains the principal GIS tool for heritage management in the SRA, especially in dealing with public information requests from developers wishing to know whether their project is likely to be subject to archaeological work or restrictions.

In contrast, territorial archaeological units have been quick to develop their own SMRs, generally starting from data exported from the national SMR. It is worth remembering that the concept of an archaeological database capable of mapping the historical townscape and predicting the likely depth and complexity of the stratigraphy is not new: the *Documents d'Evaluation du Patrimoine Archéologique Urbain* (DEPAU), edited by the CNAU during the 1980s already fulfilled this role with the GIS layers being materialised by transparent overlaying maps (Demolon, Louis & Louis-Vanbauce 1990). Contemporary GIS systems merely make it easier to update, interrogate, and visualise the existing data. All three urban archaeological services have developed similar systems, which allow the superposition of many layers of data concerning

heritage resources. They also have the distinct advantage of being integrated into the GIS systems of their respective local authorities, thus improving the dialogue with the services responsible for urban planning and development. However, the freedom to conceive and modify their databases according to their needs has brought about the very problems of interoperability and compatibility that Patriarche sought to resolve by imposing a national standard database. Work is currently underway to set up protocols for the exchange of data between the SRA and the territorial services. In the meantime, regular communication between the SRA and local authority units ensures that decisions concerning archaeological sites are made with the most complete information available.

This exchange is particularly important in the context of the pressure for all government departments to go paper-free. In the near future, development permits likely to affect archaeological remains will be communicated to the SRA by an automated system which will filter each development application on the basis of its geographical situation and predefined criteria (affected surface area, archaeological potential, etc.). This implies the creation of archaeological zones which can be processed by the system. Though the end 'product' is essentially an administrative response designed to meet the needs of the legal framework, the definition of the selection criteria demands a well-researched evaluation of the archaeological context, hence the importance of a well-documented SMR.

Research and publication – capitalising on acquired knowledge

Besides taking on the archaeological work prescribed by the SRA, territorial archaeological services play an active role in the research and publication of archaeological data for the scientific community (e.g., Borderie *et al*. 2013; Joly 2013), as well as a variety of outreach actions to the general public. The long-standing presence of a permanent territorial service with fifty years of thorough and consistent excavation and recording work has ensured the accumulation of high-quality archaeological data. Taking stock of the potential of this archive, the unit has adopted an active research policy through long-term research excavations and projects designed to reassess the results of previous excavation work.

Cultural development and archaeology – a key asset to the local identity

If archaeology has a fairly minor impact on urban planning and development policies, it plays a crucial role in providing scientific content for cultural development projects designed to increase the number of visitors and offer an improved cultural experience.

The cathedral of Chartres, a UNESCO heritage site, forms the main attraction of the city, both for visitors attracted by its architecture and stained-glass windows and because of the annual pilgrimage at Pentecost (Whitsun) of which the origins can be traced back to the 12th century. Already in 1990, the planned construction of a visitor centre in the cathedral square brought about a two-year excavation which brought to light a site composed of a cultural layer sequence of up to seven metres, including the well-preserved remains of a major Roman Period building (Figure 6), as well as the foundations and cellars of several canonical houses. These exceptional remains precluded any destruction to make way for the visitor centre, and the initial project

Figure 6. Excavation of the western square of Chartres cathedral in 1990–1992. Initially carried out in advance of a planned visitors centre, the development project was abandoned before being renewed in 2021 (© Bernard Randoin, DRAC Centre Val-de-Loire)

was shelved for nearly twenty years. Recent renovation work on the cathedral and the surrounding area has improved its appeal to the public and revived the original project for a visitor centre, which must incorporate the remains discovered in 1991–1992. The initial excavation area will be reopened and extended to cover the major part of the western cathedral square. The combined results of these excavations and the PCR (*Projet Collectif de Recherches*) centred on the Cathedral Close will form the core of the scientific project for the centre.

In order to offer a wider choice of heritage sites and spread out visitor pressure on the city centre, there is a wish to renovate and better expose the rich stock of timber-framed buildings in the medieval town and its suburbs. The cultural development project has equally been extended to incorporate the site of a vast Roman temple complex and the medieval abbey of Saint-Martin-au-Val, situated in a neighbourhood at the bottom of the Eure valley south of the historic centre.

This way, archaeology plays a positive role in the creation of a cultural project based on the complementary relations between two monumental architectural and archaeological sites, which played a central role in the spiritual, social, and political life of both the Roman and medieval cities.

The final aspect of the contribution of archaeology to building a local identity consists of the various outreach activities developed and implemented by a dedicated outreach team within the archaeological service. These actions are conceived with a wide and varied public in mind and can be divided into three main categories. In the first place, community events and open days allow the public to participate in guided tours of sites and ongoing excavations, attracting upwards of 4,000 people over a weekend. These events are also integrated into the national programmes during the national and European heritage days and may go hand in hand with the regular programme of conferences and exhibitions, which have helped to build up a solid base of regular participants and followers. These generally have a strong local theme and can involve well-known researchers, such as the exhibition and symposium organised in 2022 around the remains of a mammoth discovered at Saint-Prest (*Mammouths! Géants de la Vallée de l'Eure*). This drew in over 15,000 visitors with an opening speech by the late Yves Coppens.

The last category concerns a variety of educational actions for pupils from the primary school to the high school level. These include the *classes du patrimoine*, where heritage-orientated coursework and archaeological excavation are accompanied by site visits or school trips to heritage sites. Over 280 such classes were organised between 2018 and 2023. Outside the school environment, children can be introduced to archaeology in general via thematic workshops, recently extended to the districts outside the town centre so as to reach the less privileged population. In all the above cases, the focus is on the local heritage with which the public is more likely to identify.

Conclusion

Overall, archaeology is just one component of a wider legal and regulatory framework that aims to preserve the finite resources of the built and buried heritage. As such, it has a fairly limited influence on the policies that will affect the changing face of the urban environments of tomorrow. It does, however, play a vital role in the conception and implementation of cultural development projects that give historical depth and meaning to the urban community and are a constant source of new data for the scientific community. The economic interest of having a permanent archaeological excavation and research unit anchored in the town is difficult to quantify since direct costs are far easier to quantify than indirect benefits. However, there is an underlying understanding by all the stakeholders concerned that the cost of maintaining a strong archaeological activity is, in the long term, much lower than not doing so. In this light, archaeology has become an undeniable value rather than a simple cost. However, this acceptance is always dependent on a strong political will, which means that the state and the territorial services must continue to ensure that the services rendered to the public maintain a high quality and visibility. Whatever the outcome of France's

current uncertain social and economic situation, the different archaeological actors will continue to adapt to meet the changing demands placed on them.

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Everything clashes in the city: some Spanish examples of peaceful coexistence around archaeological heritage

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Like other southern European countries, Spain is renowned for its rich and abundant archaeological heritage, much of which remains hidden underground. The challenge of balancing the protection and enhancement of this heritage with the need to provide modern public services and infrastructure has, in recent years, led to the development of ingenious systems, which have enabled the coexistence of the material record of our past with the cities of tomorrow in various innovative ways. This paper presents recent examples of urban archaeology in Spain, demonstrating that it is possible to achieve a balance between urban development and the preservation of the archaeological heritage, with a particular focus on the case of Ibiza International Airport.

Keywords: Archaeological management, urban archaeology, preventive archaeology, territorial organisation, Punic archaeology, Roman city of Mérida, Museo Nacional de Arte Romano de Mérida, Ibiza International Airport, Ministry of Culture, Spain

An introduction to Spanish archaeological landscape and urban archaeology

Spain, a country of unparalleled historical richness, is home to an exceptional heritage of millennia-old civilisations. From the prehistoric vestiges of the first communities that inhabited Iberia to the traces of contemporary cultures, the abundance of archaeological sites reveals the cultural diversity and complexity of human evolution.

This rich, abundant, and diverse heritage appears in many variants in Spain: in the land, underwater, included in our cultural landscapes, and telling us the beginnings of the industrial and post-war society… a heritage, as it was said, quite abundant and delocalised. Experts often face the dilemma of conserving its elements upon expected and necessary urban and infrastructural development.

Especially because – although a fairly high percentage of these archaeological remains are found in the countryside – another (not inconsiderable) percentage is in urban areas, bearing witness to the long history and origins of many Spanish cities.

Therefore, the so-called preventive archaeology has played a key role in the sustainable management of the Spanish archaeological heritage in the context of major public developments in recent years. However, management archaeology (Martínez Díaz & Querol 2013), which would be crucial for preserving this heritage for future generations, has not been developed in Spain until very recently, or at least not in a comprehensive manner.

From the perspective of Spanish legislation, there is an extra difficulty besides the volume of archaeological heritage to be managed: the complex framework of management competencies is still to be developed. Spain is one of the most decentralised countries in the world. This means that the competencies of the management of archaeological heritage, especially in relation to major urban and infrastructural development, are generally assumed by each of the 17 autonomous communities and their respective municipalities (of which there are more than eight thousand). From the state's perspective, the national law on cultural heritage (Law 16/1985) determines that the state, through the Ministry of Culture, is competent only in a few cases: illicit trafficking, looting, if expressly mentioned, or on land assigned to public services managed by the state administration. This means that the state, through the Ministry of Culture, is responsible for authorising archaeological control and monitoring projects in major development projects, which usually affect services of general interest, such as state roads, hydrographic confederations, army and defence areas, national stations, and railway services throughout the territory, as well as airport areas, in addition to all public properties of the state.

With this complex image in mind, the following is a brief review of some milestones in the evolution of urban archaeology, preventive archaeology, and management archaeology, showing not only the evolution of development-led archaeology and its practice but also, through some examples, the various possibilities of applying a solution to combine the preservation and enhancement of archaeological heritage with urban development.

The beginnings: managing the growth of heritage cities. Some historical examples

The case of Mérida should be briefly surveyed first as a curiosity and to serve as a clear example of the evolution of preventive and urban archaeology in Spain. Mérida, the capital of the autonomous community of Extremadura, is a small city in south-west Spain. In the Roman Empire, it was the capital city of *Lusitania* province. It is considered one of the best-preserved Roman cities in the world today and has been a UNESCO World Heritage Site since 1993.

Figure 1 is one of the first photographs of Mérida's Roman theatre from the time of Augustus. The image shows a space very damaged after centuries of abandonment

Figure 1. One of the first photographs of the Roman theatre in Mérida, Spain (© IPCE)

and disuse; it was known as 'The Seven Chairs', the *summa cavea*, the only part visible and known from the theatre at the time. As part of the urban development of the city in the early 20th century, archaeological excavations led by a famous Spanish archaeologist, José Ramón Mélida, began on the site in 1910, followed by the subsequent reconstruction of the front of the theatre following an archaeological methodology that would be considered questionable today but was common practice back then. In fact, a 'free' reconstruction was made, which was dismantled in the 1960s and replaced by a new one, giving rise to the current appearance of the theatre (Fernández 2018; López 2021a). Focusing on its enhancement and the coexistence of the ancient and the contemporary cities, it was decided already in 1933 to give the building back its original function as a theatre with an annual celebration, the Classic Theatre Festival of Mérida, which celebrated its 70th anniversary in 2024 (https://www.festivaldemerida.es/).

Figure 2 shows the current state of the theatre and its surroundings. It stands very close to the amphitheatre, alongside the rest of the site of the ancient Roman city. Both are just a few steps away from the current city, especially the National Museum of Roman Art, a museum managed by the Ministry of Culture, which houses one of Spain's most important Roman Period archaeological collections.

Whether new buildings (newly built) or renovated ones (in historic buildings), Spanish museums are situated where archaeological remains are more frequent. In the case of the National Museum of Roman Art in Mérida, the plans of the building already mitigated the need to integrate the archaeological remains that appeared within the museum area (Sabio & Barrero 2012; López 2021b).

Figure 2. The current state of the Roman theatre in Mérida (© Mérida City Council)

The museum was inaugurated with a monographic space, known as the *crypt*, dedicated to the archaeological site discovered. This is very important because the remains allow us to understand and contextualise this part of the ancient Roman city in which the new city is growing by making visible, for example, the remains of the aqueduct of San Lazaro, one of the two that supplied the city with water, several sections of the road that connected *Augusta Emerita* with the city of *Corduba*, several residential areas located outside the walls, and part of a necropolis (Rodríguez 2015).

Works, including preventive archaeological surveys, are currently being carried out to improve the accessibility of the place. Moreover, the museum is working on a new extension, an annex to the main building with newly discovered archaeological relics, which will also be opened to visitors.

Example of peaceful coexistence: Ibiza, a paradigm of contemporary preventive archaeology and large infrastructural requirements

Besides museums, other spaces where management archaeology often plays a role in establishing a peaceful coexistence between infrastructural needs and the protection and enhancement of archaeological heritage are touristic and infrastructural spaces, especially in a country like Spain.

Airports are one of the best and most complex examples of achieving peaceful coexistence between urban development and archaeological sites, even enhancing the latter. The reason behind that is that in the development of airports, adequate planning of needs and requirements is perhaps more important than in the case of any other large element of public infrastructure to achieve objectives of public interest such buildings usually pursue, including the preservation of cultural heritage. Although this aim has not always been understood and is still sometimes difficult to achieve today, especially because of the enormous budgets and resources invested in such projects, one should not forget that the conservation of, access to, and enjoyment of cultural heritage is a constitutional right of Spanish citizens and ensuring it is a duty of the public authorities.

As for the aerial infrastructure in Spain, the regulation of the management of public airports raised the demand to create a master plan defining management and development guidelines and taking into account, among other aspects, the impact on protected elements, including archaeological heritage.

Ibiza is one of the four islands of the Balearic Islands archipelago off the east coast of Spain. This island is an important historical site not only for Spanish archaeology but also for understanding the development of maritime trade in the Mediterranean and the evolution of the different cultures that flourished and prospered there (Costa & Fernández 1997). Of particular interest are the archaeological remains from Phoenician and Punic times because the island was a strategic enclave of resources and raw materials and was key in controlling trade routes, as evidenced by exceptional archaeological sites such as, among others, Puig des Molins, Sa Caleta, and Es Culleram. The relics of the Phoenician-Punic culture in Ibiza became the true protagonists in the story of the expansion and development of the island's international airport, which has been underway since 2018.

Ibiza International Airport is in the municipality of Sant Josep de sa Talaia in the southern part of the island, approximately 7.5 km away from the capital. It was opened in 1966, at a time when, although the archaeological importance of Ibiza was already known, not only were heritage impact studies, particularly archaeological ones, non-available, but neither the sensitivity nor the awareness of heritage conservation were the same as today – especially in a case when the biggest priority was to create large infrastructure to improve the national and international coverage of air connections for air freight and promoting tourism in Spain.

Today, however, awareness and sensitivity to archaeological heritage have changed for the better, both in public administration and among developers, architects, engineers, construction companies, workers in general, and the general public. Seeing purely from the regulation's perspective, even if their effect is limited, Spanish cultural heritage regulations and environmental impact studies could bring about substantial changes in planning and determining the limitations and needs of such projects in areas with heritage potential.

So, today's thumb rule says that when the interests of developers and the archaeological heritage do not match, the appropriate response is to modify the original project sufficiently to eliminate or at least greatly minimise any risk to the heritage. However, this is not always possible. It should be borne in mind that, in most cases, public development projects in Spain are designed with the aim of providing the necessary public infrastructure to meet and cover needs related to the public interest and social welfare. Therefore, on some occasions, it is necessary to opt for strategies that satisfy both parties as much as possible. To this end, it is crucial to carry out prior evaluations that make it possible to discern not only the real possibilities of a partial or complete modification of the project but also the social benefit of whether or not the archaeological remains are fully preserved. In other words, the importance of the archaeological remains in relation to the public service provided by the project must be assessed jointly, even if this is not easy to do. In any case, the decision is not in the hands of the promoter of the project but of a competent public administration and always relies on the technical and scientific advice of archaeologists, whose presence is mandatory in any construction project on a site with heritage potential.

Returning to the case of Ibiza Airport with the above in mind, nowadays, the legal framework requires developing a master plan for every airport. These plans have to include considerations for, among others, construction projects affecting their environment in the upcoming years. The current master plan of Ibiza Airport was drafted in 2010; it counts 29 heritage asset elements and four archaeological sites. In the following years, several archaeological interventions, mainly prospecting, have been carried out to complete the previous studies. These resulted in identifying three more areas – Can Ribes, Can Ribes II and Can Bassetes – with a concentration of archaeological material, mainly Roman and Punic. The interventions not only provided new archaeological evidence but also proved a connection between these archaeological sites, now considered a single cultural unit (see below).

At the start of the airport's expansion, the remains of a hitherto unknown villa from the Roman and Byzantine periods were discovered at the very beginning of archaeological research. Because of the importance of the find, it was decided to change the construction project and preserve the remains, although in this case, it was not possible to present them to the public, as they were located in a service area of the airport (Villa González *in press* b) (Figure 3).

Another important archaeological discovery was made on Can Ribes II during the same expansion project. The start of the archaeological works coincided with the COVID-19 pandemic, which provided a unique opportunity to continue with archaeological research without restricting the operation of the airport. This unexpected turn allowed a major archaeological excavation to be carried out. The remains found confirmed not only the importance of the site but also that the remains that appeared to be scattered formed a single site, Can Ribes II. On a scientific level, the excavations allowed the documentation of a pottery production workshop, a large wooden building, and the remains of a building probably dedicated to worship, all dating from around the 3rd–2nd centuries BC (Villa González *in press* a).

Figure 3. Archaeological excavation of a trench down to the subsoil (© Antiquarium)

However, as the finds were located in the area of the runway, it was not possible to enhance the site *in situ*, and it was decided to cover and conserve the remains with geotextile and sand layers, with one exception: the engraving of a ship (Figure 4) in a cistern, to which it was considered necessary to gain access. A laser scan and a plaster cast of the engraving were also made.

The discovery of the cistern close to a possible pottery workshop is explained by the need for water in such workshops; besides, the excavations located several wells. The rectangular cistern is bottle-shaped, with a base wider than the top. Based on their vicinity, a connection between the cistern and the temple cannot be ruled out either, and it would explain the presence of a votive altar in the fill of the former (Villa González *in press* b).

Figure 4. Engraving of a boat in a cistern on the Punic site of Can Ribes II (© Arqueoestudio)

Besides the altar, the cistern's fill abounded with pottery fragments, particularly 'fish dishes' characteristic of the 3rd–1st centuries BC, and various types of amphorae, especially Punic-Ebusitan types from between 250 and 120 BC. These finds are particularly relevant because they are possibly linked to the pottery workshop nearby, which, in light of the finds, could have developed a semi-industrial activity with a clear commercial purpose. In addition, thanks to the discoveries at the Can Bassetes site (see below), it is known that grapes were cultivated on the land next to the workshop and the temple, from which wine was produced and transported in these amphorae (Villa González *in press* a). If these findings can be connected with the Sa Caleta site, they can be linked to the maritime trade routes in the area.

In fact, the engraving also provides interesting information about these possible trade routes. The depiction seems to show the hull of a ship, along with a part of the sails and what may be interpreted as a fishing net. Naval engineering was one of the great Phoenician-Punic contributions to the Iberian Peninsula. This discovery is particularly important because depictions of boats from pre- and protohistory are very rare and rarely have a clear archaeological context to study (Dams & Dams 1984). According to the studies carried out so far on this engraving (Villa González *in press* a), it seems that the image could correspond to a small boat type used both for fishing and for transporting small goods and even people by short-distance coastal navigation (Guerrero Ayuso 2006; Rey Da Silva 2014).

Finally, the expansion and development works at the airport also included building extensions to the parking areas. Soil removal associated with the related works also revealed archaeological remains, confirming the existence of cultivation ditches, possibly for vines (Figure 5) (Marlasca & López 2006) at the archaeological site of Can Bassetes. A mixed solution was adopted in this case: keeping the cultivation trenches under the new construction and removing only those above the construction level. This solution, although not ideal, was feasible, as there are abundant remains of this type in a similar condition in other parts of the island (Marlasca & López 2006).

As it was not always possible to enhance *in situ* the value of the remains discovered during the expansion works of the Ibiza airport, another possibility was chosen, close to the site of discovery.

In 2022, AENA, the agency responsible for managing Spanish airports, in collaboration with the Ministry of Culture, set up a small exhibition space at Ibiza Airport that would allow visitors to understand the historical site on which it was located. The exhibition also presents how the government manages and mitigates the coexistence between archaeology and the public in investment projects.

The exhibition, entitled *Ibiza: meeting point since ancient times*, consists of three showcases (travel, triad, and spirituality) and a video projected on a giant screen that explains the various excavations carried out in recent years and their most important findings. In 2022, Ibiza Airport welcomed more than 8.2 million travellers. Taking into account the fact that the exhibition is located in a strategic place that every passenger

Figure 5. Trenches excavated preceding the construction of the parking lot at Ibiza International Airport (© 365 Arqueología S.L.U.)

must necessarily pass through, its creation means making known to all interested how important archaeology is to understanding the island they are visiting.

In any case, the experience of Ibiza Airport shows how archaeological management and coordination between all the actors involved in the development of large urban infrastructures makes it possible to find various solutions to different challenges with the common aim of promoting the conservation and enhancement of the archaeological heritage.

We have briefly discussed the main strategies, past and present, employed in the management of Spanish archaeological heritage in the context of public development projects. In short, knowledge of the terrain concerned by the planned development is fundamental for managing the objectives set regarding deadlines and economic costs when archaeological remains are involved. This knowledge results from bringing together past archaeological research and documentation with specific surveys of the sites likely affected by the project.

Regarding the future, it should also be noted that the Ministry of Culture of Spain is currently working on creating the first National Archaeology Plan, including a national standard of archaeological management. One of the chapters will focus especially on management and good practice in preventive and urban archaeology to create a common framework as a cross-cutting strategy that hopefully will lead to better management of the archaeological heritage in Spain.

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Pipes tell Basel's urban history. Archaeology and the expansion of the district heating network

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Keywords: urban history, district heating network, 'Climate Protection Strategy', excavation, public relations, acceptance, cultural heritage, cultural identity

The Canton Basel-Stadt has a rich prehistoric and historic heritage. The former episcopal town is very well preserved and is the largest historical city centre in Switzerland. The canton's Climate Protection Strategy includes a reduction of emissions by expanding the use of solar energy and the district heating network. Over the next 10 years, the district heating system will be developed to a network of 60 km, with a budget of 460 million Swiss francs. The heating network and the upgrading of old pipes will provide the Archaeology Department with many opportunities to gain a deeper understanding of Basel's past. Against this background, we carried out three rescue excavations at the same time in the historical city centre in the last two years. As part of the Office of Culture, one of the tasks with high priority of the Archaeology Department is to present the results of the excavations and research projects to the public. In order to make the public aware of the need for archaeological excavation, the Department puts a lot of energy into public relations work using posters, press briefings, exhibitions and social media posts and 25 archaeological information points where original ancient structures are preserved or reconstructed allow to raise public awareness for Basel's cultural heritage. Thanks to this multimedial presentation and communication of results and tasks, we were able to promote public participation and create a positive and supportive environment for our archaeological work.

Introduction

Basel has a rich cultural heritage. It is the third-largest city in Switzerland with of some 176,000 inhabitants. It is characterised by a vibrant economy and cultural diversity. Various global enterprises have their headquarters in Basel. Investment in construction has doubled in recent years, which resulted in numerous highly publicised archaeological excavations taking place. In order for the archaeological service to be able to act as a partner institution to urban developers, a reliable planning process is of crucial importance.

Urban development – an overview

Basel's well-preserved historical centre, the largest in Switzerland by surface area, extends on both sides of the River Rhine. It can look back on over 2000 years of uninterrupted settlement activity. The so-called *Münsterhügel*, the plateau on which the cathedral is located today, forms the city's nucleus and is a reference point for Late Celtic, Roman, and medieval research. In the Late La Tène Period around 80 BC, an *oppidum* with an imposing ditch and bank system was established on the hill. After the Gallic Wars, the oppidum was stripped back to become a Roman vicus. In the late 3rd century AD, Münsterhügel Hill was fortified. In AD 374, Emperor Valentinian I came to *Basilia* to oversee the fortification of the border. Following the withdrawal of the Roman army, the Romanised population retained both Late Antique traditions and the Christian faith despite their close proximity to Germanic groups (Lassau & Schwarz 2024, 12, 275–277).

Romanic and Frankish influence paved the way that ultimately resulted in Basel becoming an episcopal town. After the year AD 800, Charlemagne ordered the construction of the first Basel Cathedral whose successor buildings characterise the cityscape to this day. In the 9th–10th centuries AD, settlement activities commenced at the foot of the hill. Up to around AD 1100, development was not particularly dense and the town still had many agricultural areas. Stone buildings began to be constructed from the 12th century AD onwards, oriented towards the streets and the banks of the Brisig Creek and the Rhine River. Basel had three different fortification systems over the course of the Middle Ages. By the 15th century AD, it had grown to cca. 130 hectares (320 acres) with a population of just over 10,000 (Bernasconi *et al.* 2023, 122–131).

As a consequence of industrialisation, entire residential streets in the historical centre were demolished around 1900.

The climate goal as a challenge for archaeologists (Figure 1)

The cantonal government of Basel-Stadt treats climate protection as a priority. In 2022, the population voted in favour of achieving net-zero by 2037, with one of the measures being the expansion of the district heating network. Building the necessary infrastructure, which consists of a network measuring over 60 km in length, results in cca. 45 extra construction projects each year. The sustainable treatment of the original archaeological features is challenging, as laying the district heating pipes largely involves disturbing intact layers. At the same time, these extensive archaeological insights provide us with a unique opportunity to reconstruct the city's past on a grand scale. Due to the accelerated expansion of the district heating system, three teams of archaeologists were required to carry out excavations throughout the city in 2022. The rescue excavations were planned well in advance and in close cooperation with the developers. This was possible thanks to an extensive database of some 3,650 known sites. The ongoing excavations in Kleinbasel on the right bank of the Rhine River have uncovered seventeen early medieval burials. Some of the deceased were interred with precious grave goods; for instance, a girl had a belt buckle with gold inlay and jewellery consisting of 380 beads. The highlight, however, was the discovery of a gold

Figure 1. In 2022, the remains of a row of houses, which had fallen victim to a devastating fire in the 14th century, came to light on Marktplatz Square

disc brooch in the richly furnished grave of a 7th-century AD woman (Graber *et al.* 2023, 102–111). Rescue excavations on Marktplatz Square in the centre of the city and on Freie Strasse Road have led to many new insights into the history of the medieval city centre.

Raising awareness through public relations work (Figure 2)

It is a basic concept of the Archaeological Service to raise public awareness of the links between their place of residence and its archaeological heritage. Besides public relations work and a social media presence, this includes numerous other activities such as poster exhibitions. The most exciting finds from the early medieval burials excavated during the expansion of the district heating network in 2021/2022 were presented to the public for the first time on the Night of Museums in January 2023 as part of a pop-up exhibition entitled *Discovered in Kleinbasel*. Because of the importance of the recent finds from Marktplatz and Freie Strasse, a special exhibition entitled

Figure 2. Aquamanile in the shape of a lion and pottery, found on Marktplatz Square in 2022, on display in an exhibition opened in 2024

Figure 3. Media conference with Beat Jans, then President of the Government of the Canton of Basel-Stadt and now Federal Councilor of Switzerland, and a pop-up exhibition on the Night of Museums in 2023, presenting early medieval finds from graves excavated during the expansion of the district heating network in 2021/2022

Recovered from below ground – Archaeological finds from the centre of Basel opened at the Museum Kleines Klingental in 2024.

One of the pillars of our public relations work is the network of 25 archaeological information points located at original findspots. One of the information points with medieval finds and architectural remains uncovered in 2019 can be found in a new building that houses the Department of the Environment and Energy, a beacon of sustainable development. The important phases in Basel's history can be explored on a circuit of Münsterhügel Hill. From May to October 2023, a total of 59,226 people visited the information point '*Basel, AD 820–1500 – The crypt beneath the cathedral crossing*', which presents the architectural remains of Basel Cathedral dating from the period of Charlemagne to the Reformation.

The effective public relations work, archaeological lobbying at the planning stage of construction projects thanks to reliable archaeological data, and the close coordination during the phase of construction have resulted in a situation where the Archaeological Service is now viewed as a partner and asset when it comes to the realisation of public works projects (Figure 3).

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Lübeck's Founding Quarter. Urban development at an authentic site

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Keywords: cultural heritage management, urban archaeology, public archaeology, Hanse archaeology, UNESCO World Heritage, Lübeck

Lübeck, as one of the oldest Hanseatic cities in Germany, harbours a rich historical heritage, which is particularly evident in the so-called Founding Quarter. In the years 2009 to 2016, archaeological investigateions were carried out on an area of more than 10,000 m^2 in the run-up to urban rstructuring measures, which not only revealed the origins of the city but also documented the unique development of the former merchants' quarter. Based on these findings, the following text examines the challenges and opportunities for contemporary urban development using the example of Lübeck's historic city centre. The former merchants' quarter can and should in future be seen as a living example of the successful integration of historical heritage and modern urban planning in a UNESCO World Heritage Site.

Lübeck, a city with deep historical roots, is renowned for its rich archaeological landscape, featuring over 1,000 sites that span its significant past as a Baltic port and Hanseatic hub. The city's strategic location between the Trave and Wakenitz rivers facilitated its growth as a pivotal trade centre. Lübeck's old town, encircled by water and linked by five bridges, is celebrated for its preserved architectural heritage, including its distinctive Gothic brick structures. Recognised as a UNESCO World Heritage Site since 1987, Lübeck's old town is a repository of historical and archaeological treasures, necessitating careful oversight for any ground interventions to protect its cultural heritage (World Heritage List 1987).

The so-called Founding Quarter of Lübeck, centrally positioned between the historic Hanse port on Trave River and the market square, is a cornerstone of the city's medieval legacy (Figure 1). Established in the 12th century, this area retains much of its original grid layout, highlighting its significance as a medieval trading hub. Founded in 1143 by count Adolf II of Schauenburg, Lübeck's strategic urban planning contributed to its prominence in the Hanseatic League. Despite significant damage during World War II, notably from the bombing raid of 28–29 March 1942, Lübeck undertook a determined restoration effort. The city's resilience and commitment to preserving its historical

Figure 1. Aerial view of the Hanseatic city of Lübeck from the northwest, showcasing the island layout and the seven iconic church towers. Marked in red, below the two towers of St. Mary's Church, lies the Founding Quarter, the historic area now undergoing redevelopment to blend medieval heritage with modern urban planning (© Hansestadt Lübeck, Abteilung Archäologie)

essence have made the Founding Quarter a focal point for historical and cultural interest.

Post-World War II urban development in Lübeck initially focused on rebuilding infrastructure and housing. However, the addition of Lübeck's old town to the UNESCO World Heritage List in 1987 marked a shift towards urban regeneration. By 2009, federal funding enabled the relocation of two schools and the demolition of post-war structures, paving the way for a redevelopment that respects historical significance. The demolition led to a major archaeological excavation from 2009 to 2016, revealing a wealth of medieval and modern period urban remnants (Schneider 2019). This extensive excavation unearthed wooden structures, brick buildings, and artefacts, offering invaluable insights into Lübeck's early history and everyday life as a Hanseatic city and its development under medieval rulers.

Public engagement with these findings has been a priority. The site was accessible daily, with guided tours, lectures, and events enhancing public interaction. An information point near the excavation provided displays and artefacts, while the Ulrich Gabler Foundation's integration of a 13th-century cellar into a modern building

Figure 2. Aerial view of the construction site in the Founding Quarter from 2021. It is clearly visible that the new buildings align with the historic building footprints and plot structures (© Hansestadt Lübeck, Abteilung Archäologie)

created a space for both historical education and cultural activities. Additional public initiatives, such as the reconstruction of a medieval wooden cellar by the Youth Monument Preservation Team and its showcase at Berlin's Martin-Gropius-Bau, further highlighted Lübeck's medieval heritage (Rieger & Jahnke 2018).

The aftermath of the excavation led to the development of the Founding Quarter with 38 new buildings (Figure 2). These structures, combining residential, commercial, and cultural spaces, reflect modern urban life while respecting historical planning. The project, supported by the federal government's 'National UNESCO World Heritage Sites' program, emphasises cultural and social diversity and incorporates historic materials from the excavation. Despite challenges like rising construction costs, the redevelopment represents a successful integration of historical preservation and contemporary urban needs.

Looking to the future, Lübeck's Archaeology Department is working on initiatives to enhance public engagement with its archaeological heritage. Starting soon, trial stations will provide free access to key archaeological sites, aiming to create interactive

Figure 3. Interpretation approach of the archaeological traces in the Founding Quarter in the historic cellar of Fischstraße 11. Here you can see the remains of a Steinwerk from the Danish period of Lübeck, dating back to the early 13th century (© Hansestadt Lübeck, Abteilung Archäologie)

and gamified experiences that deepen public connection with Lübeck's history. Preserving and integrating five historic brick cellars into new buildings at Fischstraße will ensure that these architectural elements remain accessible and meaningful (Figure 3). Recent projects, including events during the Hanse Cultural Festival and World Heritage Day, are steps toward establishing a dedicated archaeological museum that Lübeck's rich discoveries and finds warrant.

These future projects promise a dynamic integration of Lübeck's rich historical legacy with modern urban development, enhancing public engagement and celebrating the city's enduring heritage. The vision for Lübeck's archaeological future includes creating immersive experiences that bridge past and present, ensuring that Lübeck's Founding Quarter remains a vibrant and authentic testament to its historical significance.

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Urban archaeology differs from other fields of archaeology in many ways, as in such environments, the density of buildings and the accumulation of archaeological phases over centuries can be great. Urban excavations are complex and expensive. In addition, other sources, such as written documents and maps, are often available. Urban archaeology happens in often densely populated centres, so it is visible and tangible. All of this presents many challenges; however, at the same time, the added value of urban archaeology is enormous, not only in terms of our knowledge of the past but also in terms of engaging the wider public in archaeology. With increasing urbanisation, the pressure on space will continue to grow, and with it, the opportunities and possibilities of archaeology to show what the past has to offer. The papers presented at the 25th symposium of the EAC, some of which are published in this volume, demonstrate this well. Urban archaeology is at the frontier of archaeological conservation.

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