SECTION 1
The Layered Dimension of Urban Conservation

1 Archaeology: Reading the City through Time[1]

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> Memory is not an instrument for exploring the past but its theatre. It is the medium of past experience, as the ground is the medium in which dead cities lie interred.
>
> Walter Benjamin

Introduction

Cities are undergoing massive transformations, creating irreversible demands on limited archaeological resources. During these processes, it is often difficult to reconcile the interests of development with archaeological research and heritage conservation, which is a particularly pressing issue in the context of urban growth and regeneration. In a world where '*the future of humanity is irrevocably linked to the city*'[2] we might argue that it has been so for millennia – there is a need for urban archaeology and development to be seen as complementary strands of an approach to creating vibrant twenty first century urban communities. Heritage, and specifically archaeology, has a crucial role to play in helping to produce resilient cities, capable of sustaining and developing their inhabitants.

Advances in promoting dialogue between government agencies, planners, development companies, heritage professionals and international agencies currently are threatened by a combination of rapid urban growth, financial crises and decentralised decision-making. Whilst these problems are differently expressed in different parts of the world, there are many areas of common interest to those concerned with the study and care of the historic fabric of the world's cities.

Almost all cities are the result of complex processes of layering through time. These processes have both contributed to the shaping of the physical landscape inhabited today and also, much more subtly, created an atmosphere of use, a demarcation of physical and social space, and an experience of the sense of the city.[3] Archaeology offers a unique source of informa-

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[1] I am grateful to the UCL Research Group 'Managing archaeology in the new urban context', and specifically Hana Koriech, Joe Flatman and Dominic Perring, for their stimulating input to discussions and their enthusiasm for the issues.
[2] *Cities of Asia*. Available at: http://whc.unesco.org/en/activities/498/ (Accessed September 2013).

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tion on how urban societies have been conceived and sustained. Whilst the study of towns cannot be divorced from the study of wider settlement landscapes, urban archaeology has a distinct identity: it involves both the study of past urban systems and the practice of field research within modern cities. The main contribution that archaeology makes to the study of towns is through its description of spatial and temporal change. Archaeological research has developed a greater awareness of the social and temporal dimensions of space,[4] and the potential of morphological analyses[5], but the study of how urban spaces were navigated and experienced requires much greater attention.

Against this backdrop, the concept of Historic Urban Landscape seeks to recognise the layering of values present in any historic city.[6] UNESCO's Historic Urban Landscape initiative led to the *Recommendation on the Historic Urban Landscape*.[7] This specifically highlighted the 'time dimension' to managing historic cities (indeed, the fact that most of the world's cities have historic antecedents), and also implicitly recognised that archaeological methods are a primary source of knowledge that needs to be integrated with management practice. The development of a landscape approach reflects the growing emphasis upon holistic approaches to heritage management.[8] These have sought to move archaeological resource management away from reactive interventions, fighting over the future of individual sites when they are threatened, towards a long-term engagement with urban policies and practices, and integrating archaeological issues with urban planning, conservation and development processes. By understanding and exploring the archaeology of our cities we can contribute so much more. This also raises questions about the balance between preserving archaeological remains *in situ* and excavating them to enable the knowledge gained from the process to contribute to contemporary interpretation.

This paper explores these issues with the aim of defining research areas and tools that will

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[3] See in particular: Lynch, K., (1960) *The Image of the City*, London: MIT Press. Lynch, K. (1976) *Managing the Sense of a Region*, Cambridge: MIT Press. In Banerjee, T. and Southworth, M. (eds) (1990) *City Sense and City Design. Writings and Projects of Kevin Lynch*, Cambridge: MIT Press. Hall, P. (1998) *Cities in Civilization: Culture, Innovation and Urban Order*, London: Weidenfield & Nicolson. Ouf, A. (2001) Authenticity and the Sense of Place in Urban Design. *Journal of Urban Design* 6 (1): 73–87. In Schofield, J. and Szymanski, R. (eds) (2011) *Local Heritage, Global Context: Cultural Perspectives on Sense of Place*. Farnham, Surrey: Ashgate.

[4] See in particular: Laurence, R. (1994) *Roman Pompeii: Space and Society*, London: Routledge. In Laurence, R. and Newsome, D. (eds) (2011) *Rome, Ostia, Pompeii: Movement and Space*, Oxford: Oxford University Press.

[5] See for instance: Hillier, B. and Hanson, J. (1984) *The Social Logic of Space*, Cambridge: Cambridge University Press. Batty, M. and Longley, P. (1994) *Fractal Cities: A Geometry of Form and Function*, London: Academic Press. Batty, M. (2005) *Cities and Complexity: Understanding Cities with Cellular Automata, Agent-based Models, and Fractals*, Cambridge, Massachusetts: MIT Press.

[6] Bandarin, F. and Van Oers, R. (2012) *The Historic Urban Landscape. Managing Heritage in an Urban Century*, Chichester: Wiley-Blackwell. In Van Oers, R. and Haraguchi, S. (eds) (2010) *Managing Historic Cities*, Paris: UNESCO. Van Oers, R. and Roders, A. P. (2013) Road Map for the Application of the Historic Urban Landscape Approach in China. *Journal of Cultural Heritage Management and Sustainable Development* 3(1): 4–17. Rodwell, D. (2007) *Conservation and Sustainability in Historic Cities*, Oxford: Wiley-Blackwell. Araoz, G. (2008) World-Heritage Historic Urban Landscapes: Defining and Protecting Authenticity, *APT Bulletin* 39 (2/3): 33–37.

[7] UNESCO (2011) *Recommendation on the Historic Urban Landscape*. Please see: http://whc.unesco.org/en/activities/638.

[8] See for example: Cleere, H. (ed) (2000) *Archaeological Heritage Management in the Modern World*, London: Routledge. Teutonico, J. M. and Matero, F. (eds) (2003) *Managing Change: Sustainable Approaches to the Conservation of the Built Environment*, Los Angeles: The Getty Conservation Institute. McManamon, F. and Hatton, A. (eds) (2000) *Cultural Resource Management in Contemporary Society: Perspectives on Managing and Presenting the Past*, London: Routledge. Aplin, G. (2002) *Heritage: Identification, Conservation, and Management*. South Melbourne: Oxford University Press. English Heritage (2000) *Power of Place: the Future of the Historic Environment*, London: English Heritage. Hall, C. M. and McArthur, S. (1996) Strategic Planning. In Hall, C. M. and McArthur, S. (eds) *Heritage Management in Australia and New Zealand*, Oxford: Oxford University Press: 22–36. Mason, R. (2002) Assessing Values in Conservation Planning: Methodological Issues and Choices. In De la Torre, M. (ed) *Assessing the Values of Cultural Heritage*, Los Angeles: The Getty Conservation Institute: 5–30.

assist in the integration of archaeological thinking into contemporary urban management.

Problems and Issues

Over-simplistic Dichotomy between Preservation and Development

> *With the world turning into a global village, urban encroachment is one of the major factors endangering historic cities, and the pressure of economic development is seen as one of the underlying causes of this daunting threat.*[9]

This common portrayal places urban heritage, and particularly buried archaeological resources, as being in opposition to the needs of twenty-first century communities. Archaeology is perceived not as an asset, but rather as an obstruction or hindrance. There will often be conflicting values placed upon any given space: the archaeological knowledge of buried or exposed remains, versus the economic value of the space for reuse, being an obvious example. And very real tensions do exist: as McGill states '*there has rarely been a time like the present when new development has been so necessary*'[10] while '*conservationists, on the other hand, have vociferously argued that the archaeological heritage is a finite resource that is rapidly diminishing due to development*'.[11] It is also portrayed as rare that these elements can work together: '*municipalities … are more focused on urban development to support economic growth and job creation*'.[12] They may be, but again by over-simplifying the tensions we do little to explore the solutions.

Values are much more complex, and looking for a more holistic approach, beyond the apparently oppositional elements, can reveal more common ground between stakeholders: the desire to create a sense of place, the attempt to create a distinctive impact on the built urban environment, the aim to draw people into navigating and engaging urban space, etc., all facets to which archaeology and historic fabric can, and should, make a significant contribution. Archaeology also needs to be bolder with its contribution – we have the ability to engage with powerful narratives of place, and through these with community engagement.

Heritage conservation is often criticised as 'monument-centric', concentrating on individual historic buildings to the exclusion of their context. This is often because the connection between buildings and their urban landscape is poorly understood or articulated.[13] This lack of integration is exemplified in the *Recommendation on the Historic Urban Landscape* which only mentions archaeology twice (and both of these in the glossary). In the *Edinburgh World Heritage Site Management Plan* there are references to archaeology, giving some idea of the city's archaeological potential, and espousing that buried archaeology is an integral and vital part of the World Heritage Site and that its conservation, promotion and interpretation are objectives.[14] But this is not actually followed through: there is no mention of archaeology under threats/risks, sustainability, measuring the state of conservation, or implementation. This is fairly typical: archaeology is recognised as a characteristic of place, but not really as a contributor to it, and certainly not as something to be actively used to create a sense of place (see the case study in Box 1.1).

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[9] CyArk blog site: http://archive.cyark.org/heritage-at-risk-urban-encroachment-blog [Accessed October 2013].

[10] McGill, G. (1995) *Building on the Past: a Guide to the Archaeology and Development Process*, London: Spon: xvii.

[11] Skeates, R. (2000) *Debating the Archaeological Heritage*, London: Duckworth: 58.

[12] Global Heritage Fund (2010) *Saving our Vanishing Heritage*, Palo Alto: Global Heritage Fund: 34.

[13] Menon, A. G. K. (2005) Heritage conservation and urban development: beyond the monument, *Heritage Conservation and Urban Development*. New Delhi: INTACH. Sinha, A. and Sharma, Y. (2009) Urban Design as a Frame for Site Readings of Heritage Landscapes: A Case Study of Champaner-Pavagadh, Gujarat, India. *Journal of Urban Design* 14 (2): 203–221.

[14] City of Edinburgh Council (ed) (2011) *The Old and New Towns of Edinburgh World Heritage Site. Management Plan 2011–2016*, Edinburgh: City of Edinburgh Council.

Box 1.1 Beirut, Lebanon

Beirut has witnessed the contestation of preservation versus development, with major arguments between conservationists and developers, and archaeologists seen as 'colluding' with the developers to remove extensive areas of remains to facilitate the development process. There is no doubt this is true, one function of archaeological recording is to document archaeological evidence before it is destroyed, and if the wider 'will of society' (or at least those with power in the decision-making process) is not to retain *in situ*, then urban archaeological methods provide a powerful tool to document and communicate significance (Figure 1.1). However, in Beirut not all the archaeology was removed in advance of redevelopment: the development company Solidere had a strong agenda of creating a sense of historical reference in the post-war city and were keen to integrate archaeological remains and historic fabric, along with historical motifs, into the urban design process (Figure 1.2). In some instances these were token gestures, and there is no doubting the scale of archaeological resources removed in the overall process, but nevertheless it was also evident that archaeology did play a significant role in urban design, and specifically an attempt to integrate it into a sense of place, with historically rooted identity.

These engagements have also created a longer process, as now *in situ* preservation and display of archaeological remains is considered an important strategy in urban planning in the city (Figure 1.3), with a strong emphasis on creating distinctive locations and settings in the urban landscape. However, the debate over destruction continues, and the issues are far from resolved.

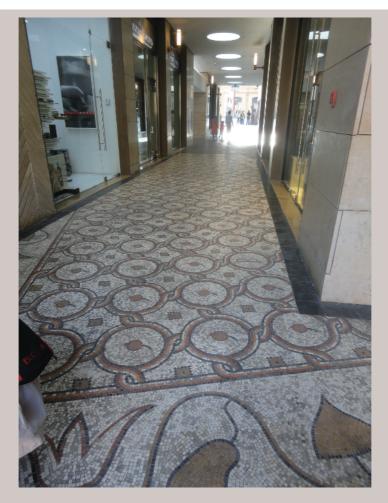**Figure 1.1** Extensive excavations in advance of development in Beirut, Lebanon.

Figure 1.2 A reconstruction of excavated mosaics in the modern shopping area of the Beirut Souks, Lebanon.

Sources:

Alkantar, B. (2013) Minister of Culture 'Dismantles' Beirut's Roman Hippodrome. *Al Akhbar Newsletter*. Available at: http://english.al-akhbar.com/node/5155 (accessed 28-10-2013).

Battah, H. (2013) Activists Fight to Preserve Beirut's Roman Heritage, *BBC website*. Available at: http://www.bbc.co.uk/news/world-middle-east-24222755 (accessed 28-10-2013).

Carver, M. (2009) *Archaeological Investigation*. London: Routledge.

Gavin, A. (1996) *Beirut Reborn: the Restoration and Development of the Central District*. London: Academy Editions.

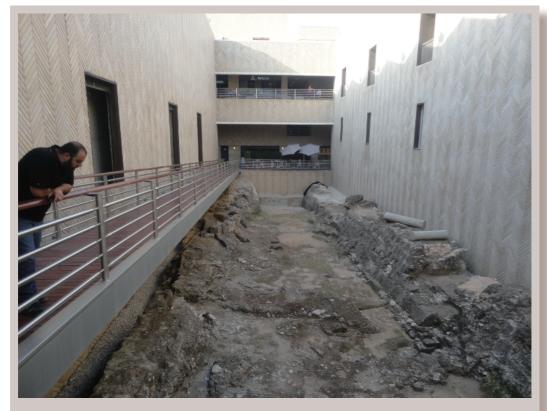Lawler, A. (2011) Rebuilding Beirut, *Archaeogy (Archaeological Institute of America)* 64 (4).

Naccache, A. (1998) Beirut's Memorycide. Hear no Evil, see no Evil. Meskell, L. (ed) *Archaeology under Fire. Nationalism, Politics and Heritage in the Eastern Mediterranean and Middle East*. 140–158. London: Routledge.

Perring, D. (1983) *Manuale di archeologia urbana*. Milan: Gruppi archeologici Nord Italia.

Perring, D (2009) Archaeology and the Post-war Reconstruction of Beirut, *Conservation and Management of Archaeological Sites* 11(3–4): 296–314.

Roskams, S. (2001) *Excavation*. Cambridge: Cambridge University Press.

Figure 1.3 Display *in situ* of part of the rock cut city ditch within the new shopping complex of the Beirut Souks, Lebanon.
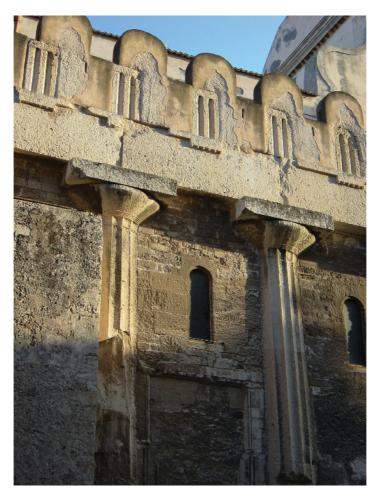
Sandes, C. (2010) *Archaeology, Conservation and the City: Post-conflict Redevelopment in London, Berlin and Beirut.* Oxford: Archaeopress.

Seif, A. (2009) Conceiving the Past: Fluctuations in a Multi-value System, *Conservation and Management of Archaeological Sites* 11: 282–295.

Spence, C. (1990) *Archaeological Site Manual.* (2nd ed) London: Department of Urban Archaeology, Museum of London.

There is still a conceptual separation for many people between below ground archaeological remains, whether buried or exposed, and above ground fabric. The latter tends to be divided between ruins and habitable structures, with the former perhaps more often seen as archaeological and the latter classified as historic buildings. However, most archaeologists do not see such a distinction: all standing structures have below-ground elements (Figure 1.4) and buried structures do not cease to be historic buildings (e.g. Pompeii). There are obviously different challenges when faced with the active reuse of historic structures, but the separation of these elements, and the discussion of the contribution archaeology makes to the historic urban landscape, is often hampered by such distinctions. These narrow definitions within the historic

Figure 1.4 The Duomo in Syracuse, Sicily, Italy, showing elements of a classical structure incorporated into later builds of the medieval and post-medieval periods: there is no distinction between the complexity of the built fabric and its below-ground elements.

environment constitute a major obstacle to a discourse on heritage and the city.

Challenges to Presenting Archaeological Sites in Modern Urban Landscapes

There are a number of very practical issues that make the presentation of archaeological sites within modern urban settings a particularly challenging activity. The most obvious is the basic physical separation of archaeological remains from the modern street level. In the pre-mechanised era, urban redevelopment (on whatever scale) seldom was able to mobilise or commit the scale of resources needed to transport large quantities of building debris away from the urban environs. A new street was simply laid on top of an old surface, rather than as would often happen today, where the old surface would be removed and the debris transported out of town; the result was street surfaces

Figure 1.5 Parco Archeologico della Neapolis, Syracuse, Sicily. A general air of abandonment and the lack of interpretation does little to integrate this area into the modern urban landscape.

rising up in comparison to the floor levels of adjoining buildings. When the latter were redeveloped, the building rubble from the pre-existing structure was often used to raise up the building plot to the new street level. This build-up of archaeological deposits over many centuries, with the superimposition of one building or street over another, has led to modern urban street levels often being considerably higher than the buried archaeological remains: in London, for example, Roman floor levels commonly lie between 3 and 6 meters below the contemporary ground surface. The result of this is that most archaeological remains exposed within modern urban settings appear to be 'down holes' – physically separated from the modern streetscape. This physical separation often makes it difficult to integrate those remains into modern contexts,

such as parks or open spaces. Neglected holes often become traps for rubbish, either deliberately discarded or simply blown in. Access for maintenance can be difficult and the combination of rubbish and vegetation often creates the impression that the spaces are neglected and unused (Figures 1.5 and 1.6). Indeed, this perception of a barrier between the present and the past does little to actually improve the integration of archaeological remains into a contemporary intellectual landscape of urban life. The remains appear as an echo of the past rather than as an integral part of the shaping of the landscape they inhabit.

Another key challenge in the presentation of urban archaeological remains is the issue of their legibility. Archaeologists in an urban environment seldom have the opportunity to select the

Figure 1.6 Parco Archeologico della Neapolis, Syracuse, Sicily. Vegetation growth makes the interpretation of the site impossible, but also suggests that it is no longer making a contribution to the present.

areas for archaeological excavation: these areas are nearly always the consequence of wider factors of urban development. While this can have strengths, in terms of examining the complexity of past urban landscapes, it also means that archaeologists do not have control over the extent to which specific building plans are exposed. The discovery, for example, of part of the Roman amphitheatre in London did not lead to the exposure of the entire structure but rather the presentation of the relatively small part that fell within the development footprint.[15] This can work adequately when the fragment of the structure within the development has an understandable relationship to the entire complex: so in the case of the Roman amphitheatre even a relatively small fragment can act as a catalyst to articulate the interpretation of the wider building and its landscape setting (Figure 1.7). However, many archaeological remains provide a small window on much larger structures or built landscapes; a few walls from a large urban monastic complex, for example, are challenging to use to engage the visitor or resident in a meaningful understanding of the past landscape (Figure 1.8). In addition, '*while these sites tell interesting stories in themselves, it is sometimes difficult to connect them conceptually or physically to one another, or to envisage the urban or rural landscapes in which they once existed*',

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[15] Bateman, N. (2001) *Gladiators at the Guildhall: the Story of London's Roman Amphitheatre and Medieval Guildhall*, London: Museum of London Archaeology Service.

Figure 1.7 Part of the Roman amphitheatre on display beneath the Guildhall Art Gallery in London, UK. Although only a relatively small part of the overall monument, because of the nature of the structure the remains are easily understood by visitors.

Figure 1.8 Impressive remains of the thirteenth century Winchester Palace in Southwark, London. While visually striking, most visitors find it difficult to understand the original context and setting of the huge medieval complex, nor can relate these remains to the development of the modern urban landscape.

Figure 1.9 Partially excavated and conserved remains, covered by a shelter, in the centre of Bukhara, Uzbekistan. This fragment of a wider landscape is currently under-interpreted, and the design of the shelter visually divorces the remains from the contemporary landscape: indeed, most visitors pass it by without recognising that archaeology is on display, nor how these remains contribute to their sense of place, either past or present.

and this '*can also obscure evidence of broader historic urban planning principles that are still evident (archaeologically or otherwise) in street grids, views, setbacks, open space and density of development*'.[16] Again, archaeologists need to demonstrate and articulate the relevance of material remains to the understanding of the development of the urban landscape.

The below-ground nature of exposed remains also poses challenges for their conservation. It can often be difficult to ensure adequate drainage, with sites becoming damp and prone to problems with vegetation. As with all archaeological sites, in whatever context, the process of excavation and exposure creates new challenges for the previously buried fabric, but the tensions in an urban context of trying to provide visual access to remains whilst also ensuring their conservation are perhaps particularly challenging. Conventional approaches to sheltering do not easily adapt themselves to modern urban settings (Figure 1.9). However, the incorporation of archaeological remains into new buildings offers an interesting approach to this dilemma and also

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[16] Allen, C. (2005) Archaeology and Urban Planning: Using the Past in Design for the Future, ICOMOS (ed) *15th ICOMOS General Assembly and International Symposium: Monuments and Sites in their Setting. Conserving Cultural Heritage in Changing Townscapes and Landscapes.* 17–21 Oct 2005, Xi′an, China. ICOMOS. Available at: http://openarchive.icomos .org/357/.

potentially to some of the tensions between the economic pressure to utilise urban space for modern development and the desire to retain archaeological remains *in situ* and on display. It is evident, however, that in the majority of cases the pressure for conservation of archaeological remains and new build has often been addressed by a process of reburial rather than conservation and display.

Preservation *in situ* and Mitigation Strategies

Arising from the period in the 1970s and 1980s of rapid urban development and concomitant struggles to adequately document the archaeology being destroyed, the move to a preventive approach seemed both logical and essential.[17] This movement ultimately led to the *Valletta Convention*,[18] which required that signatories of the treaty should implement measures for the physical protection of archaeological heritage *in situ* (see Articles 4.2 and 5.4).

Preserving archaeological remains *in situ* can also offer advantages to the developer, especially in enabling a clear strategy to be developed at a relatively early stage in the planning process,

thus reducing or removing archaeological risk. In addition, given the concomitant concept that developers often have to pay for the excavation of archaeological deposits, which the development will destroy (the 'polluter-pays' principle), developers can avoid archaeological excavation if it is cheaper to preserve *in situ*. These principles have been widely disseminated and implemented in many parts of the world[19] and this prioritisation of preservation *in situ* has become the new orthodoxy.

However, this approach is not without its critics: it has become the '*central dogma of western archaeological heritage management … [which] … while surely useful and important in some situations, preservation in situ is too problematic in several ways to be acceptable as an ethical principle with broad validity*'.[20] Indeed, it has often developed, in practice, into a rigid and inflexible approach by decision-makers, supported by the mantra of 'preserving the past for the future', which is used to justify preservation policies. But all heritage is about ascribed values[21] and decision-making prioritising one value, preservation for future generations, over all others certainly risks the accusation of dogma. In the first instance there is seldom clear agreement regarding which archaeological resources are considered significant enough to preserve,

[17] Hodges, H. (ed) (1987) *In Situ Archaeological Conservation*. Mexico: The Getty Conservation Institute/INAH. Stanley Price, N. (ed) (1995) *Conservation on Archaeological Excavations, with Particular Reference to the Mediterranean Area*. Rome: ICCROM. Biddle, M., Hudson, D. and Heighway, C. (1973) *The Future of London's Past: a Survey of the Archaeological Implications of Planning and Development in the Nation's Capital*. Worcester: Rescue. ICCROM (1986) *Preventive Measures during Excavation and Site Protection. Conference, Ghent, 6–8 November 1985*. Rome: ICCROM. Mathewson, C. and Gonzalez, T. (1988) Protection and Preservation of Archaeological Sites Through Burial. Marinos, P. and Koukis, G. (eds) *The Engineering Geology of Ancient Works, Monuments and Historical sites. Preservation and Protection. Volume 1*. 519–526, Rotterdam: A.A. Balkema. Olsen, O. (1980) Rabies archaeologorum, *Antiquity* 64: 15–20. Thorne, R. (1989) *Intentional Site Burial: a Technique to Protect against Natural or Mechanical Loss*. Washington, DC: US Department of the Interior, National Park Service.

[18] Council of Europe (1992) *European Convention on the Protection of the Archaeological Heritage*, Strasbourg: Council of Europe.

[19] Naffé, B., Lanfranchi, R. and Schlanger, N. (eds) (2008) *L'archéologie préventive en Afrique: enjeux et perspectives*. Actes du colloque de Nouakchott, 1–3 février 2007, Saint-Maur-des-Fossés: Sépia.

[20] Willems, W. (2012) Problems with preservation *in situ*, *Analecta Praehistorica Leidensia* 43/44: 1.

[21] De la Torre, M. (ed) (2002) *Assessing the Values of Cultural Heritage*, Los Angeles: The Getty Conservation Institute. In Mathers, C., Darvill, T. and Little, B. (eds) (2005) *Heritage of Value, Archaeology of Renown: Reshaping Archaeological Assessment and Significance*, Gainesville: University Press of Florida. Smith, G., Messenger, P. and Soderland, H. (eds) (2010) *Heritage Values in Contemporary Society*. Walnut Creek, Calif.: Left Coast Press. Spennemann, D. (2011) Beyond "Preserving the Past for the Future", Contemporary Relevance and Historic Preservation, *CRM: the Journal of Heritage Stewardship* 8 (1–2): 7–22.

and very few attempts have been made to be explicit about the criteria or values used in such decision-making. There is an evident bias towards the monumental and the elite: large public buildings of the Roman era, constructed of stone or brick, such as amphitheatres, theatres, bath houses, fora, etc., litter our modern cities, but how many clay and timber domestic buildings have been prioritised for *in situ* conservation (let alone display)? So is the archaeological evidence of the urban life of the majority of the population less valuable than the expression of power? And what of the potential to prioritise other values in decision-making, such as research, public engagement, education, capacity building, developing a sense of place, constructing meaningful urban destinations, etc.? As Tunbridge and Ashworth stated: '*the present selects an inheritance from an imagined past for current use and decides what should be passed on as useful to an imagined future*'.[22] An *a priori* decision to preserve *in situ* suggests that we have yet to balance preservation with other goals.

The implementation of preservation *in situ* strategies is also seldom as clear cut as we may wish. There is a danger that heritage management, under pressure to reach compromises with the economic values of development, will allow mitigation strategies that involve invasive measures (peripheral trenching, bored piles, etc.) that result in partially excavated (but poorly understood) sites, with the remaining portions '*preserved in situ in awful conditions … with virtually no chance of survival until a very hypothetical future research excavation*'.[23]

The efficacy of preservation *in situ* has also been questioned: while there have been considerable advances in approaches to the preservation of archaeological remains *in situ*, and for strategies to mitigate the impact of new build on buried remains, research suggests that archaeological materials in many circumstances continue to decay and the corrosion rates of buried metal artefacts have been a particular concern.[24] Wider concerns regarding fluctuating water tables, de-watering, compression from overlying structures,[25] demonstrate that archaeological deposits are not always static and that reburied sides, in some cases, are actively degrading. This concern, of course, exists outside the urban field.[26] There has certainly been too little research into the impact of reburial and the effective monitoring of sites in the long-term (see case study in Box 1.2).

Nevertheless, all of these reservations do not actually detract from the need to preserve *in situ*: there is no doubt that archaeological deposits in our urban centres are a finite resource. However, what is required is a robust policy towards decision-making, which encompasses other values and recognises that local context is vital.

Civic Engagement and Urban Community

Civic engagement contributes to the vitality of urban communities, reflecting on ambitions for a higher quality of life, promoting different forms of representation, and offering an outlet for expressing different identities and cultural

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[22] Tunbridge, J. and Ashworth, G. (1995) *Dissonant Heritage: the Management of the Past as a Resource in Conflict*, Chichester: Wiley-Blackwell: 6.

[23] Willems, W. (2012) Problems with Preservation *In Situ*, *Analecta Praehistorica Leidensia* 43/44: 4.

[24] Gerwin, W. and Baumhauer, R. (2000) Effect of Soil Parameters on the Corrosion of Archaeological Metal Finds, *Geoderma* 96 (1): 63–80.

[25] See, for example, 'Theme 1: Degradation of Archaeological Remains'. Gregory, D. and Matthiesen, H. (eds) (2012) *The 4th International Conference on Preserving Archaeological Remains In Situ (PARIS4): 23–26 May 2011, the National Museum of Denmark, Copenhagen*. Special Edition of Conservation and Management of Archaeological Sites 14 (1–4). Martens, V. V. and Vorenhout, M. (2013) Guidelines for *In Situ* Preserved Archaeological Sites and Areas, *The European Archaeologist* 38 (Winter 2012/13): 61–62. Willems, W. (2012) Problems with Preservation *In Situ*, *Analecta Praehistorica Leidensia* 43/44: 2.

[26] In marine contexts: Manders, M. (2009) *In Situ* Preservation: the Preferred Option, *Museum International* 60(4): 31–41.

Box 1.2 UK

In 1990 the UK Government published *Planning Policy Guidance 16 Planning and Archaeology* (PPG16). PPG16 established a process for dealing with archaeological remains affected by development, in which the key element was '*where nationally important archaeological remains, whether scheduled or not, and their settings, are affected by proposed development there should be a presumption in favour of their physical preservation*' (PPG 16 paragraph 8). Issues arise, of course, regarding 'significance': what constitutes nationally important remains and who decides? Perhaps rather more importantly, there was no presumption in the PPG to study, articulate, present or interpret the archaeological remains; although not specifically stated in the PPG, the practice of reburial has become the preferred option.[27] This has been hugely damaging in establishing archaeology as a viable contributor to modern urban design: with nothing visible to form any linkage between the archaeological past and the contemporary urban landscape it is little wonder that archaeology can be perceived as an obstruction, not an asset.

Source: Department of Environment 1990. *Policy Planning Guidance 16: Archaeology and planning.* London: HMSO.

values. Such issues are of great concern to cities, addressing the problems and opportunities of high population densities, immigration, unregulated development, housing shortages (and homelessness), and gentrification. Planning issues build on intangible issues such as conflicting senses of place, identity and diversity. While city landscapes fix themselves into neighbourhoods with particular 'identities', space can also be divided along economic and social lines. Transient populations add to the problems of maintaining social cohesion and nurturing participatory civic and local identities. City administrations are increasingly occupied with how to provide for youth, diverse communities, and

marginalised groups, in a manner that encourages education and a sense of place, while acknowledging the contribution of the wide array of identities already formed.

Archaeological knowledge, including the tangible material culture and eco-factual data generated from excavations, along with *in situ* sites, can all play an important role in framing local identities, and provide a resource for civic and community engagement. However, there are a number of issues about the speed with which archaeologists are able to disseminate the results of their work. A major obstacle for well-recorded urban archaeological sequences is that they produce vast quantities of stratigraphic, material culture, and bio-archaeological data. These require considerable time and effort to effectively analyse and present, often meaning that the results of complex archaeological work are unavailable for some years after the excavations. While this is an inevitable process, it has the end result of divorcing the development process and the outputs of archaeological research. The immediacy of discovery is often reflected in the local media, but this long analytical process often means it is difficult to build upon the sense of momentum and interest at the time of discovery. This is also reflected in funding difficulties: while excavations are on-going developers, and the development process, recognise the need to resource archaeological activities; once the excavation is over and the archaeology 'passes out of sight' it is often much more difficult to sustain funding streams to enable the archaeology to be adequately analysed, archived, and perhaps most importantly presented/disseminated. Once again, new urban archaeologies need to convince funders and policy makers of the contribution archaeology can make to wider societal processes, and develop processes that enable archaeological data to rapidly and effectively make those contributions.

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[27] English Heritage's professional advice website specifically states: 'The key element is the presumption in favour of reburial' (http://www.english-heritage.org.uk/professional/advice/advice-by-topic/heritage-science/archaeological-science/preservation-*in situ*/) (Accessed October 2013).

The irony, of course, is that less rigorous work, with less attention to detail, is easier to publish. There is a major issue here about quality control in archaeological work: the principle that the developer funds the archaeological process (the 'polluter-pays') falls down if they are not engaged with the quality of the process – which in many cases they are not; they are engaged with enabling the site to be developed. If the developer has been engaged in the outputs of the archaeology, in terms of creating a destination, a sense of place, building a sense of community, etc., then they may be more concerned with the product of the archaeological research; but in reality this is still a rarity. Archaeology needs robust quality control,[28] but it also needs to engage planners and other decision-makers with the quality and contribution archaeology has to make to civic issues.

Designation

In many countries areas are legally designated for their historical and/or archaeological value.[29] In these areas, special regulations apply and sometimes special administrations have responsibility. However, these measures often only concern a small part of the historic urban fabric and most of the significant changes have been framed in response to public opposition: for example, the Rose Theatre in the United Kingdom.[30] The emphasis of many legislative frameworks, therefore, has been with resolving past conflicts rather than anticipating future needs. The growing emphasis on localism and decentralisation, accentuated by the neo-liberal emphasis on deregulation, suggests that local interpretations of legislative mechanisms and approaches will become ever more divergent. The relaxation of planning controls to encourage entrepreneurial development in many countries may also lead to widespread destruction and lost research opportunities. Archaeologists will need to be more proactive in the process.

Integration into Strategic Planning

The integration of archaeology into strategic planning, especially spatial planning, has been much more successful in rural landscapes; as is evidenced by the development of cultural landscape approaches significantly earlier in this area,[31] in contrast with its much later adoption within 'historic urban landscapes'.[32]

Some attempts have been made to develop a stronger linkage between archaeological data and urban planning processes, for example the *Urban Archaeological Database* programme in

[28] Willems, W. and Van der Dries, M. (2007) *Quality Management in Archaeology*, Oxford: Oxbow Books.

[29] Aplin, G. (2002) *Heritage: Identification, Conservation, and Management*. South Melbourne: Oxford University Press. Carman, J., (1996) *Valuing Ancient Things: Archaeology and the Law*, Leicester: Leicester University Press. Cookson, N. (2000) *Archaeological Heritage Law*, Chichester: Barry Rose Publishers.

[30] Corfield, M. (2004) Saving the Rose Theatre: England's First Managed and Monitored Reburial, *Conservation and Management of Archaeological Sites* 6: 305–314. Corfield, M. (2012) The Rose Theatre: Twenty Years of Continuous Monitoring, Lessons, and Legacy, *Conservation and Management of Archaeological Sites* 14(1–4): 384–396. Sidell, J. (2012) Paris, London: One Hundred and Fifty Years of Site Preservation, *Conservation and Management of Archaeological Sites* 14(1–4): 372–383.

[31] Fairclough, G. and Rippon, S. (eds) (2002) *Europe's Cultural Landscape: Archaeologists and the Management of Change*, Brussels, Belgium: Europae Archaeologiae Consilium. Clark, J., Darlington, J. and Fairclough, G. (eds) (2003) *Pathways to Europe's Landscape: European Pathways to the Cultural Landscape 2000–2003*, Heide: Council of Europe. Fairclough, G. (2003) Cultural Landscape, Sustainability, and Living with Change? Teutonico, J. M. and Matero, F. (eds) *Managing Change: Sustainable Approaches to the Conservation of the Built Environment*, 23–46. Los Angeles: The Getty Conservation Institute. Rossler, M. (2006) World Heritage Cultural Landscapes: A UNESCO Flagship Programme 1992–2006, *Landscape Research* 31 (4): 333–353.

[32] Bandarin, F. and Van Oers, R. (2012) *The Historic Urban Landscape. Managing Heritage in an Urban Century*. Chichester: Wiley-Blackwell.

the UK;[33] unfortunately most of these are not fully embedded within local planning processes. Most urban archaeological information systems, if they exist at all, are not well structured for strategic planning: most tend to be focused on individual monuments/structures (as excavated and observed), or on surviving scales of resources (depths of deposits, waterlogging, etc.). All of these are useful, but seldom provide a wider analysis of values and significance that would help to underpin their role in strategic urban planning. An example is Lincoln in the United Kingdom[34] where deposit and monument based data were analysed to develop significance and vulnerability maps for the local authority.

The declining number of archaeologists engaged in local civic administration urban planning, in the face of the global financial crisis, puts further pressure on this integration. A recent report in England[35] has highlighted the issue, as well as an associated press release from the *Institute of Historic Building Conservation* stressed that: '*This massive loss in conservation knowledge and specialist advice equates to the reduction of one in three conservation officer posts in local government, threatening the proper care of heritage as well as the huge investment of public monies into England's historic environment.*'[36]

City Services, Infrastructure and Archaeological Impact

One of the main characteristics of an urban landscape is its developing infrastructure, designed to service ever-increasing and changing populations. Cities need to develop advanced city services and infrastructure: public open space; recreation facilities; complex transportation systems; reliable communication networks (including fiberoptics, telephone services, etc.); public services such as water and sewage.

The archaeological implications of such work are considerable, but are often neglected in the face of the political and economic needs of regeneration, and within the context of the pace of the development processes. There is little doubt that archaeology is perceived as an agency that slows or hampers development; either through the time needed for archaeological research and documentation, or through the demands of *in situ* preservation. Civic responses to the problems of infrastructure development, and different approaches to the process of assessing and mitigating impacts, provide a telling measure of the perceived role and status of heritage resources.

Sustainable Development

The importance of sustainability, the buzzword of the twenty-first century, should not be underestimated because of tokenistic overuse. Economic and political responses to the perceived environmental impacts of urbanisation are bound to condition the way in which we engage with the archaeological past and manage archaeological resources. Similarly most heritage professionals recognise the need to describe their work in terms of its sustainability, but the perceived desirability of promoting activities as 'sustainable' can obscure important distinctions between what is environmentally, economically, socially and physically sustainable. This is particularly the case in the area of heritage tourism, where investment in the study and interpretation of archaeological landscapes is often geared towards increasing visitor numbers as a way of promoting economic regeneration.

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[33] Thomas, R. (2004) Urban Characterisation: Improving Methodologies, *Conservation Bulletin* 47: 11–17.

[34] Jones, M., Stocker, D. and Vince, A. (2003) *The City by the Pool: Assessing the Archaeology of the City of Lincoln*, Oxford: Oxbow.

[35] English Heritage, Association of Local Government Archaeological Officers, and Institute of Historic Building Conservation 2013. A fifth report on Local Authority Staff Resources. *English Heritage*. Available at: http://www.ihbc.org.uk/skills/resources/5th-rep-LAStaff.pdf [accessed 9-11-2013].

[36] Institute of Historic Building Conservation: http://ihbconline.co.uk/newsachive/?p=6410 (Accessed October 2013).

Approaches and Potential

Strategic Planning

Most cities and towns have short, medium and long-term strategic plans to inform future development and policies. For archaeology to make a significant contribution to the contemporary urban environment and its planning it needs to engage with this strategic planning process. To do this archaeology needs to develop solid information platforms and strong strategic visions.

Geographic Information Systems (GIS) offer great potential for integrating earlier individual monument/site/find data, with below ground deposit modelling, to develop a solid platform for future decision-making. It is crucial that this data is well documented, but also that the interpretations of the data, in terms of significance and values, are effectively communicated to all the potential users. Archaeological priorities need to be clearly established and expressed, to create a proactive, not reactive, environment: this is not about depth of deposits, for example, but why they are important.

All of this requires a landscape approach. The development of historic landscape approaches[37] recognised the significance of urban landscapes. This emphasised the need to move from a site or monument based approach to one that considers the contribution that archaeology makes to the understanding of the development of the whole urban landscape. This has been a major shift in the approach to archaeological heritage management; which is ironic, considering that most early archaeological research into the city was very cognisant of the importance of seeing each archaeological observation as simply a window into a broader landscape.

Integrating the Physical Archaeological Remains into the Contemporary Urban Environment

The integration of archaeological remains into the urban environment is a complex process, which faces challenges from shifting attitudes and values, questionable standards of practice, poor legislative frameworks, and the on-going struggle of establishing a beneficial relationship between archaeology, development and the community. The process of integrating archaeological remains into the urban environment touches on many of the obstacles and challenges discussed above, but these are magnified by the condensed, densely-populated and complex characteristics of the urban landscape.

Numerous strategies have been adopted in urban areas to display archaeological remains. Archaeological parks, or large areas of exposed archaeological remains, are relatively rare inside modern urban centres. Athens[38] and Rome[39] (Figure 1.10) are perhaps the two of the best examples of large areas of archaeological remains within functioning modern urban centres. They create a sense of destination, especially for tourists, and a strong sense of place in those areas around the exposed sites, with restaurants, cafes

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[37] Fairclough, G. and Rippon, S. (eds) (2002) *Europe's Cultural Landscape: Archaeologists and the Management of Change*, Brussels, Belgium: Europae Archaeologiae Consilium. Lozny, L. (ed) (2006) *Landscapes under Pressure: Theory and Practice of Cultural Heritage Research and Preservation*. New York: Springer. Bloemers, T., Kars, H., Van der Valk, A. and Wijnen, M. (eds) (2010) *The Cultural Landscape & Heritage Paradox: Protection and Development of the Dutch Archaeological-historical Landscape and its European Dimension*, Amsterdam: Amsterdam University Press. Turner, S. (2006) Historic Landscape Characterisation: A Landscape Archaeology for Research, Management and Planning, *Landscape Research* 31(4): 385–398.

[38] Papageorgiou, L. (2000) The Unification of Archaeological Sites of Athens. The Birth of an Archaeological Park? *Conservation and Management of Archaeological Sites* 4: 176–184. Parlama, L. and Stampolidis, N. (2000) *Athens: the City beneath the City: Antiquities from the Metropolitan Railway Excavations*. Athens: Greek Ministry of Culture, Museum of Cycladic Art.

[39] Ricci, A. (2011) Archaeology and Today's Cities: the Case of Rome, *Heritage Reinvents Europe. A Critical Approach to Values in Archaeology, the Built Environment and Cultural Landscape, 12th EAC Heritage Management Symposium Ename, Belgium, 17–19 March 2011*, Europae Archaeologiae Consilium.

Figure 1.10 Trajan's Market and the forum, Rome, Italy.

and other amenities vying for space within the visual catchment of these landscapes.

But such large areas are unusual within modern urban landscapes: they are difficult to create, certainly today, and difficult to maintain against the pressures on urban space and the impacts of urban life.[40] It is much more common to encounter projects to display specific monuments (or more often parts of monuments), juxtaposed with modern buildings, public spaces and streetscapes. There are two principal strategies: exposed remains in open spaces, and covered remains contained within (or more accurately under) modern structures. The former tended to be the preferred option, not least because of engineering constraints. The latter has become increasingly popular, as modern construction systems have enabled larger areas to be spanned without intervening supports, and the possibility of retaining the built space while sacrificing the basement area to the archaeology has sometimes seemed an attractive option for developers.

Displaying remains inside modern buildings (Figure 1.11) has numerous advantages for the archaeology: the potential for controlled access and security, conservation gains (such as a climate controlled space, lighting levels, and protection from weathering), and interpretative space (for example, the ability to create space for different forms of interpretative media that would not be feasible in an open air context, or the opportunity to integrate material culture from the excavations within the site display).[41]

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[40] In Rome – see Day, M. 10 November 2013, 'Rome Wasn't Rebuilt in a Day: Mayor Faces Long and Costly Fight to Make its Ancient Treasures Traffic-free'. *The Independent.*

[41] Keily, J. (2008) Taking the Site to the People: Displays of Archaeological Material in Non-Museum Locations, *Conservation and Management of Archaeological Sites* 10 (1): 20–40.
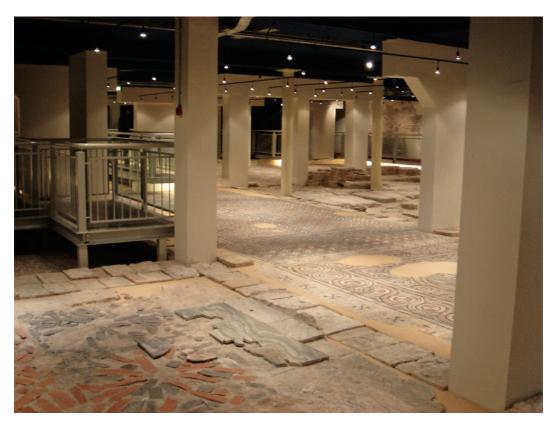
Figure 1.11 Archaeological remains displayed under a modern building in Ravenna, Italy. Accessed via the Church of Sant'Eufemia.

This approach can also enable the continued use of urban space, for example with the excellent Museu d'Història de la Ciutat-Plaça del Rei in Barcelona, Spain (Figure 1.12), where the display of the archaeological remains, integrated with an on-site museum, take place beneath the functioning urban public square. But with display inside modern structures there is also the danger that this isolates the archaeological remains from the contemporary urban landscape and makes it difficult for it to contribute to a sense of place.

Open sites are problematic (as discussed earlier), with issues over access, conservation and interpretation, but they can also provide strong visual links and can create a sense of place and impact upon residents and visitors. The strengths of visual cues within the landscape should not be under-rated.

A possible middle ground is archaeological remains under purpose built shelters, combining the strengths of a managed and controlled environment with greater opportunities to design linkage between the remains and the city (Figure 1.13).

Archaeological Knowledge and Its Potential Impact on Urban Communities

We have noted the challenge of communicating archaeological information rapidly and effectively from the time of discovery through to the culmination of analytical work. This is seldom achieved with complex urban sequences. Perhaps one of the best examples was the excavation at

Figure 1.12 The Museu d'Història de la Ciutat-Plaça del Rei, Barcelona, Spain. (Photograph from APPEAR project).

Figure 1.13 Roman Saragossa, Spain: 'Roman Walk' links monuments and the city wall, integrating them in the urban setting and with other cultural walks, and with linked signposts in the town (Photograph by © Tony Rotondas (under Creative Commons Attribution-Share Alike 3.0 Unported)).

No. 1 Poultry in the City of London. A popular publication, *Heart of the City*,[42] reached tens of thousands of people while the excavations were still fresh in their minds, and this was followed by an impressive reconstruction of the domestic buildings/shops in a Museum of London exhibition *High Street Londinium*,[43] arguably one of the best exhibitions of urban archaeology ever mounted. All of this preceded the detailed presentation of the analytical archaeological programme much later.[44] In more recent work at Bloomberg Place, Museum of London Archaeology (MoLA) have very effectively used hoardings around the site (physical access was too difficult in terms of health and safety) to communicate discoveries, and QR codes have linked these visual panels to more in-depth web-based resources (Figure 1.14).

There is also a need to think through the landscape connections between individual elements of archaeological evidence (our small windows on to the past) and the wider historic landscape. Rather than articulating each individual element, the aim should be to develop approaches, which link *in situ* evidence, archaeological knowledge, and the contemporary landscape. Urban landscapes offer rich grounds for exploring visual connections and a sense of place (see also Box 1.3). An example of this is the *Archaeological Landscape Management Strategy* (ALMS) prepared for Parramatta in Sydney, Australia.[45] Here opportunities for understanding and conserving important archaeological sites were developed on a landscape basis, using planning, interpretation and architectural tools to build an interpretation of the historic development of the urban centre.

Box 1.3 APPEAR

An important European Commission project, *APPEAR: Managing archaeological remains in towns and cities: from discovery to sustainable display*, was undertaken to provide advice and guidance for a wide range of potential stakeholders: public authorities, communities, developers, museum curators, archaeologists, conservators, etc. The final report appeared in 2007, and the crucial supporting data and case studies were made available on a website, but unfortunately this has subsequently disappeared. Nevertheless, the report focused on the concept that archaeological remains can benefit:

- Today's inhabitants: by helping them to understand their historical roots.
- Urban design: by integrating ancient remains with the modern environment.
- The urban economy: by providing jobs.
- Visitors: by enriching their experience of the town.
- Students: by direct contact with historical evidence.

Source: European Commission (2007) APPEAR: Managing Archaeological Remains in Towns & Cities: from Discovery to Sustainable Display, http://www.*in situ*.be/guide_en.pdf.

Urban museums also have a crucial role in utilising the knowledge and material culture gained through archaeological tools to reconceptualise the urban landscape for residents and visitors. These are powerful places to create a distinctive destination and provide the opportunity to engage diverse audiences. City museums can 'change lives' by contributing to strong and resilient communities.[46]

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[42] Rowsome, P. (2000) *Heart of the City: Roman, Medieval and Modern London Revealed by Archaeology at 1 Poultry*, London: Museum of London Archaeology Service.

[43] Hall, J. and Swain, H. (2000) *High Street Londinium: Reconstructing Roman London*, London: Museum of London.

[44] Hill, J. and Rowsome, P. (2011) *Roman London and the Walbrook Stream Crossing: Excavations at 1 Poultry and Vicinity, City of London*, London: Museum of London Archaeology.

[45] Allen, C. (2005) Archaeology and Urban Planning: Using the Past in Design for the Future. ICOMOS (ed) *15th ICOMOS General Assembly and International Symposium: 'Monuments and Sites in their Setting - Conserving Cultural Heritage in Changing Townscapes and Landscapes'*, 17–21 Oct 2005, Xi'an, China. ICOMOS. Available at: http://openarchive.icomos.org/357/.

[46] Museums Association (2013) *Museums Change Lives*, London: Museums Association: 5.

Figure 1.14 (a,b) Hoarding around the MoLA Bloomberg excavation site in the City of London, UK, with imagery linked to QR codes for further information.

Communication technologies (and widespread social networks) are increasingly at the forefront of how we communicate our results and engage with different/wider stakeholders. Many of these approaches offer the potential to go far beyond the transfer of information: the site that links to the web via a QR code is a powerful tool, but beyond that there is the opportunity to engage people and enable them to participate in both the process and its interpretation (e.g. History Pin[47]).

Preservation In situ and Mitigation Strategies

The environments of buried sites are affected by anthropogenic or natural changes. Issues regarding the nature of the ground environment, how archaeological evidence changes through time, and the impacts of short- and long-term change, are key areas of research. Considerable work has been undertaken on the complexity of preservation and mitigation strategies,[48] but there are still concerns that the '*results remain limited because of the complexity of degradation processes*'.[49] (Specifically there has been much discussion of saturated urban deposits and the concerns of de-watering.)[50]

There have been a number of significant technological advances: for example, approaches to mitigation strategies and piling[51] and specific design solutions (e.g. a variety of structural solutions used at Vienne, France[52]). There is also a need to emphasise monitoring: Jim Williams review of 30 years of monitoring made recommendations to help improve future monitoring projects, including that '*more work is needed on assessing the state of preservation of a site before monitoring is considered; that a proper project design needs to be developed at the outset of the work; and that more thought should go into deciding why monitoring is needed for a given site, including identifying mitigation options that can be initiated if monitoring data suggest optimum conditions for survival are no longer being maintained*'.[53] All of this also requires a significant change in the education and training of archaeological conservators.[54]

New Urban Archaeologies

The future of urban archaeology lies in demonstrating it has relevance to twenty first century urban communities. In general, archaeology has enormous potential to create narratives that help to develop a sense of place and a sense of purpose.

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[47] History Pin website: www.historypin.com (Accessed October 2013).

[48] Corfield, M. (ed) (1998) *Preserving Archaeological Remains In Situ: Proceedings of the Conference of 1st-3rd April 1996*, London: Museum of London Archaeology Service. Nixon, T. (ed) (2004) *Preserving Archaeological Remains In Situ? Proceedings of the 2nd Conference, 12–14th September 2001*, London: Museum of London Archaeology Service. Kars, H. and van Heeringen, R. (eds) (2008) *Preserving Archaeological Remains In Situ: Proceedings of the 3rd Conference, 7–9 December 2006, Amsterdam*. Amsterdam: Institute for Geo and Bioarchaeology. Gregory, D. and Matthiesen, H. (eds) (2012) *The 4th International Conference on Preserving Archaeological Remains In Situ (PARIS4): 23–26 May 2011, the National Museum of Denmark, Copenhagen*. Special edition of Conservation and Management of Archaeological Sites 14 (1–4).

[49] Willems, W. (2012) Problems with Preservation *in Situ*, *Analecta Praehistorica Leidensia* 43/44: 3.

[50] Caple, C. forthcoming, *Preservation of Archaeological Remains in Situ*, London: Routledge.

[51] Davis, M. (ed) (2004) *Mitigation of Construction Impact on Archaeological Remains* London: Museum of London Archaeology Service. English Heritage (2007) *Piling and Archaeology*. Swindon: English Heritage.

[52] Example of approaches using 'ribbed, reinforced frames, on restored and compacted soil' and 'steel-reinforced piles driven in and connected by horizontal beams or longitudinal girders': see http://www.culture.gouv.fr/culture/arcnat/vienne/en/annexe62.htm (Accessed October 2013).

[53] Williams, J. (2012) Thirty Years of Monitoring in England - What Have We Learnt? *Conservation and management of archaeological sites* 14(1–4): 442–457.

[54] Caple, C. (2008) Preservation *in Situ*: the Future for Archaeological Conservators? *Conservation and Access: Contributions to the 2008 IIC Congress, London*. International Institute for Conservation of Historic and Artistic Works.

To achieve this we need to ensure the quality of the process: high quality excavation[55] and properly funded research, clear and transparent decision-making on *in situ* preservation, creative strategies for on-site presentation, and valuing and developing urban museums. It is also about enabling complex narratives to be developed that explore the historic urban landscape, not isolate fragments of it. *in situ* archaeological remains, and archaeological excavations, will, by their very nature, be fragmentary windows into past landscapes. What is urgently needed is more attention to transforming these into historic urban landscapes; building research, and from that narratives, that enable communities, planners and developers to understand the significance of the time depth of their cities and weave these into their contemporary mental maps.

Preservation and conservation agendas have confused a need to preserve, for an unknown future, with actually engaging with significance. Other issues, such as legislative frameworks, design solutions, etc., all follow on from this.

Some of the major issues that the discipline needs to grasp include:

- **Engineering practices:** There is much work to do to develop engineering practices that will conserve archaeological strata in the long term, and monitoring systems that will support this.
- **Urban archaeological recording systems:** Developing recording systems that improve on-site interpretation and enhance research output.
- **Research and outreach strategies:** We need to develop rapid approaches that sustain the process from the excitement from the time of discovery, through to an understanding of relevance and impact that shapes development and reaches the community. This in no way compromises the long-term goal of rigorous archaeological analysis and timely academic publication, but this process recognises the value of archaeological information to wider community planners, developers, residents and visitors, and sees this as a vital and dynamic part of the archaeological process, not as an optional extra.

- **Synthesis:** We need to build upon synthetic archaeological research into past urban societies, exploring the complexity of urban systems from broad morphology, such as road networks and public spaces, through to the complexities of urban life, such as rubbish disposal, water supply, and feeding the city. These broader narratives of urban development and life are powerful tools in communicating the complexity of urban change and are often the most effective mechanisms for engaging in the broader debates about a sense of place and community.

- **Communication in the urban environment:** Museums, as well as new technologies, have a significant role in the transmission of information about archaeological heritage to as large an audience as possible. Wider communication and interpretation strategies, and the integration of city museums into education and interpretation, are vital if we are to bring a realisation of the value of archaeological material to the contemporary city.

- **Urban archives:** There is a key challenge in how we choose to archive archaeological material and research in an environment that is finding storage space increasingly expensive. We must ensure the physical enation of this research material, especially if we are to do more than nod at the concept of 'preservation by record' that helped to justify its removal from the ground in the first place. But perhaps even more significantly we need to ensure that this material is used, particularly to create dynamic relationships between

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[55] Excavation is not a bad thing; it enables us to engage communities and planners in the relevance of archaeological knowledge to contemporary society.

residents and their historical past and enable meaningful urban experiences.

- **Supporting urban planning:** Archaeology must actively engage in strategic planning: '*urban designers and city administrators [are] concerned with providing a historical urban identity as much as an authentic urban identity … through selectivity in deciding the locations to be conserved*'.[56] Archaeology must be proactive in participating in these debates. This is not just about preservation strategies, either city-wide or site specific, but about the contribution that archaeology can make to urban planning: sense of place, identity, physical and visual references, etc.

- **Develop linkages:** There is a need to build on the links between decision-makers and urban communities. Archaeology needs to develop an outward looking research culture for the archaeological study of urbanism that embraces both field practice and academic inquiry, and develops inter-disciplinary working.

- **Creating and sustaining a sense of place:** Archaeology needs to actively research the ways in which it can contribute to the wider debate on how the historic environment plays a role in communities' sense of place (Figure 1.15). This needs to stop paying patronising lip-service to the idea that simply having fragments of the archaeological past in the urban landscape makes a significant contribution and needs to really engage with the concept of using archaeological sites, buried deposits and the results of excavations to truly engage people with these issues.

Mental mapping, developed by Kevin Lynch,[57] explores the representation of time in place and the visual perception of urban form, and is based on the theory that people experience landscapes as places, not artefacts. As such, it provides a useful tool to explore how people understand and reference their urban landscape, and as an element of this, how archaeological evidence and *in situ* sites impact upon the sense of place for urban communities. It is the author's opinion that we would be depressed by the results, but what such research does show is the potential for archaeology, through better interpretation, education and engagement, to make a significant impact.[58]

This understanding can then help to integrate archaeology into urban design. For example, at Champaner-Pavagadh in Gujarat, India:

> *Urban design interventions can provide a framework for thoughtful and imaginative site reading and interpretation. The interventions use a different medium of expression than reproducing historical precedent – the attempt is not to mimic the past but to evoke it through a visual and spatial vocabulary of design.*[59]

Conclusion

We need to develop a much more nuanced approach to articulating the complex values archaeological remains and evidence have in contemporary urban societies. We must move beyond a simplistic preservation for preservations sake; as William Lipe suggested, preservation is only a means, not an end:

> *In sum, what should drive archaeological preservation is the social benefit that archaeology can provide to society over the long run. That benefit is primarily the contribution of knowledge about the past derived from systematic study of the archaeological record. In situ preservation of archaeological resources is a tool for optimizing that benefit. (… …..) Long-term, frugal consumption of the archaeological record by well-justified research—both problem-oriented and*

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[56] Ouf, A. (2001) Authenticity and the Sense of Place in Urban Design, *Journal of Urban Design* 6 (1): 73–87.

[57] Lynch, K. (1960) *The Image of the City*, London: MIT Press.

[58] Dhanjal, S., forthcoming, *Is There a Role for Archaeology in Diverse Urban Communities?* PhD thesis.

[59] Sinha, A. and Sharma, Y. (2009) Urban Design as a Frame for Site Readings of Heritage Landscapes: A Case Study of Champaner-Pavagadh, Gujarat, India,. *Journal of Urban Design* 14 (2): 203–221.

Figure 1.15 Part of the 'Topography of Terror' in Berlin, Germany, where archaeological evidence of the Gestapo buildings and Berlin Wall are juxtaposed with graphic and textural interpretations to engage the visitors with an understanding of the evolution of the landscape of Berlin through these processes.

mitigation-driven—must be an accepted and integrated part of the preservation program. If the research doesn't get done, or if it gets done and we don't learn anything from it, or if only scholars learn from it and the public is shut out, then preservation will have been in vain, because its goals will have not been achieved.[60]

Thus we need to achieve greater articulation of archaeological narratives, to promote an appreciation of the potential benefits of integrating archaeological knowledge and fabric into the urban landscape. This needs to be coupled with a much more sophisticated appreciation of what urban planners, designers and developers are trying to achieve. The contribution that archaeology can make to concepts such as resilient and sustainable cities are immense, but we have yet to carry that debate forward with conviction.

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[60] Lipe, W. (1996) In Defence of Digging. Archaeological Preservation as a Means, Not an End, *CRM* 19 (7): 23–27.