

Conservation / Sustainable Design

Heritage Challenges
in Historic Urban Landscapes

VIII EAAE CONSERVATION
NETWORK WORKSHOP



**European Association for
Architectural Education**
Association Européenne pour
l'Enseignement de l'Architecture

EDITORS

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written by 43 participants following
the 8th Workshop CONSERVATION/
SUSTAINABLE DESIGN organized
by the Conservation Network of the
European Association for
Architectural Education and the
UNESCO Chair “Heritage, Cities and
Landscapes. Sustainable
Management, Conservation,
Planning and Design”.

The workshop was hosted in the
Faculty of Architecture of the
University of Porto between 21st
and 24th of September 2022 and was
attended by 49 participants from
23 Universities, representing 9
countries: Portugal, Italy, Romania,
Spain, Ireland, United Kingdom,
Brazil, Belgium and Montenegro.

The views and opinions expressed
herein are those of the authors and
do not necessarily reflect the
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The Role of the UNESCO Buffer Zone between Heritage Conservation and Urban Development

Cross-cutting reflections on Bologna and Porto

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The static and sometimes aestheticizing perspective on cultural heritage associated with UNESCO¹ (Choay 1995; 2008) has gradually shifted, in recent years, towards a more dynamic approach and confidence in the ability of historic urban fabrics to adapt to pressing global challenges like the pandemic, the economic crisis and the digital and green transitions.

The key to understanding and consciously managing the historic urban environment has thus become the ability to govern the different active economic, social, environmental and cultural forces that contribute to its complexity. Simultaneously, the idea that layered urban fabrics should be preserved by establishing strategic alliances and value-oriented processes among the various urban actors has also been affirmed (UNESCO 2013).

Historic Urban Landscape (HUL) has been defined as “the result of a historic layering of cultural and natural values and attributes, extending beyond the notion of ‘historic centre’ or ‘ensemble’ to include the broader urban context and its geographical setting... , social and cultural practices and values, economic processes and the intangible dimensions of heritage as related to diversity and identity” (UNESCO 2011: 3). Such a definition confirmed UNESCO’s holistic approach to cultural heritage management, which integrates conservation and sustainable development objectives.

Also, the improvement of management strategies for sites included in the World Heritage List (WHL) — being not just an implementation tool but also the most significant outcome of the Convention concerning the Protection of the World Cultural and Natural Heritage (UNESCO 1972) — reaffirmed the need for such an approach to preserve, through policy documents and guidelines, the Outstanding Universal Value (OUV) of cultural heritage. One of these documents is the Management Plan (MP), a “unique, cyclical, interacting, sufficiently flexible, realistic, sustainable” plan (UNESCO et al. 2013: 60; Orioli, Ugolini and Mariotti 2022: 7-12) whose dynamism is guaranteed by its periodic updating.²

In World Heritage Sites (WHS) in particular, to manage the complexity of heritage inside and outside the UNESCO-listed area, buffer zones have become a key element, both as a physical place and a complementary (though not necessary) tool for protecting the property (or core zone) and as an opportunity for reflection and experimentation

- 1 UNESCO’s approach to heritage (in particular, World Heritage) appeared to most as impaired by an obsolete and nostalgic cultural approach while adhering to the general principles of the Venice Charter (1964). Also, early guidance for the protection and restoration of World Heritage List properties pursued philological approaches derived from a French-style intellectual climate, in many ways distant from the complexity of the Italian one. Françoise Choay has stigmatized such an approach as a form of “heritage fetishism” (Choay 2008: 108).
- 2 In general, the average Management Plan lasts 3 to 5 years. The World Heritage Committee designed the MP as a dynamic tool to be reviewed cyclically in the years following its approval to introduce new projects and adapt existing ones to changing conditions.

for policymakers willing to adopt a wider approach to conservation and management. The “buffer zone” concept has now taken centre stage in the cultural debate, as demonstrated by the International Expert Meeting on World Heritage and Buffer Zones organized by UNESCO in Davos, Switzerland in 2008, which reaffirmed its role as a driver in the implementation of up-to-date site-level conservation practices and in facing new challenges and present and future threats (Martin and Piatti 2009: 9).

CONNECTING EXPERIENCES: FROM BOLOGNA TO PORTO [CM]

In the light of the above, this paper reflects on the role and potential of buffer zones to connect World Heritage Sites and Historic Urban Landscapes, and to become breeding grounds for preservation and sustainable development policies rooted in their spatial and cultural contexts, but with a comprehensive and integrated vision.

Successful experiences like that of the *Porticoes of Bologna*, listed in the WHL in 2021, are examples of effective integration of UNESCO site planning with planning strategies for the surrounding urban areas, and of the interdependence between UNESCO’s and local management tools. Such an achievement stems mainly from the careful delimitation of the buffer zone, which in Bologna includes the entire historic centre and large portions of the historic city (Orioli and Mariotti 2022: 136).

The observations proposed here also consider the Portuguese context, specifically the city of Porto and its UNESCO site, in the light of the experience gained with the analysis and recent application of the Porticoes of Bologna at the WHL.³

Porto’s historic centre became a World Heritage Site twenty-seven years ago (1996) and it has since come under severe pressure from increased tourism and building speculation, leading to a loss in population and in the authenticity and integrity of the listed site (Cunha Ferreira and Tarrafa Silva 2019; Tarrafa Silva, Cunha Ferreira and Pinto

3 The authors, together with Valentina Orioli (Associate Professor of Urban Planning and Town Councillor in Bologna charged with the Promotion of Cultural Heritage and UNESCO Porticoes), have been working for years on UNESCO management strategies and tools, especially on the World Heritage Sites in the cities of Emilia-Romagna, Italy. Andrea Ugolini collaborated in the drafting of the General Urban Plan of Bologna (PUG), providing indications on the protection of ancient, modern, and contemporary buildings and urban fabrics and suggesting ways to analyse and enhance their tangible and intangible components and their perceptive dimension. Chiara Mariotti supported the design and implementation of heritage-led urban regeneration strategies for the cultural and creative district of Bologna and the porticoed street of Via Zamboni — as part of the European Horizon 2020 ROCK (Regeneration and Optimisation of Cultural heritage in creative and Knowledge cities) project (Grant Agreement No. 730280) — which were incorporated into the Management Plan of Bologna included in the UNESCO application for the Porticoes.

2018) which was only made worse by the COVID-19 pandemic, especially the restrictive sanitary measures. Today Porto needs to rethink previous tourism-centred development models in favour of an approach based on community involvement and on empowerment to identify and preserve the key values of the urban areas, while balancing transformation and preservation of architectural heritage.

This paper aims, therefore, to reflect on the experiences of Bologna and Porto and on possible new operational tools to manage the transformation of historic urban landscapes, balancing preservation and development, and to stress, once again, the importance of conceiving heritage not as just monuments and sites but as an integrated, systemic and co-evolutionary ensemble.

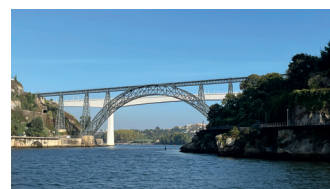


FIG. 1 Porto. View of the bridge system across the Douro River, 2022.

LEARNING FROM WORLD HERITAGE SITES: *THE HISTORIC CENTRE OF OPORTO AND THE PORTICOES OF BOLOGNA*

— BRIEF DESCRIPTION: URBAN CONTEXTS, PROPERTIES, AND BUFFER ZONES [CM]

The UNESCO sites considered here are typical of medium-sized European historic centres but display metropolitan features: the city of Porto, capital of the district with the same name — the second largest by population in Portugal⁴ — has an area of 41.42 km² and 246,204 inhabitants and is the third most populous city in the country. The city of Bologna, capital of the metropolitan area with the same name⁵ and of the Emilia-Romagna region in Italy, covers an area of 140.9 km² with 391,400 inhabitants.⁶

The city of Porto was established and developed across the hills overlooking the northern bank of the Douro River, not far from the Atlantic Ocean. Bologna, on the other hand, is an inland city that lies on the southern foothills of the Po Valley, close to the mountains of the Tuscan-Emilian Apennines. The two cities are well known as the “city of bridges” and the “city of towers,” respectively (FIGG. 1-2).

Tourism is an aspect that both unites and distinguishes the two cities. In Porto, the consistent tourist flow is a consequence of its inclusion in the WHL, and the number of tourists exceeds that of the local population (D’Eramo 2017: 96). In Bologna, tourism has been growing

4 The metropolitan area has about 1.700.000 inhabitants (2020 Census) and includes Vila Nova de Gaia, a city of about 300.000 inhabitants, the second most populated area of Portugal after Lisbon. For more information, consult: <http://portal.amp.pt/pt/> [Accessed: 28 February 2023].

5 The metropolitan area of Bologna has about 1.017.000 inhabitants (2020 Census). For more information, consult: <http://inumeridibolognametropolitana.it/> [Accessed: 28 February 2023].

6 Statistical data referenced are taken from: <http://popolazione.population.city/portogallo/> (Porto) and <http://inumeridibolognametropolitana.it/> (Bologna) [Accessed: 28 February 2023].



FIG. 2 Bologna. Wide shot of the tower system in the historic urban fabric (in Sarti 2021: 15).



FIG. 3 Porto. Elements representing the Portuguese World Heritage Site, 2022.

exponentially since 2019 (except for the pandemic years) but it was unaffected by the UNESCO nomination (although it almost certainly contributed to tourism recovery in 2022) and the city features a large population of citizens and city users (university students, workers, commuters, etc.).

Both cities also feature multi-layered historic urban settlements, a history of urban conservation and land-use governance tools, having developed relevant studies and urban plans in the wake of the international debate on historic centres in the second half of the 20th century, like Fernando Távora's *Estudo de Renovação Urbana da Ribeira Barredo* (1969) and Pierluigi Cervellati's *Bologna Historic Centre Plan* (1969). They also share a lively approach to integrated conservation and urban development programs (Orioli 2020; Tarrafa Silva, Cunha Ferreira and Pinto 2018; Porto City Council 2021).

The UNESCO sites of Porto and Bologna are both classified as “cultural sites”: The Historic Centre of Porto — recently updated as Historic Centre of Oporto, Luiz I Bridge and Monastery of Serra do Pilar⁷ — and The Porticoes of Bologna were inscribed in 1996 (ID 755) and 2021 (ID 1650) respectively.⁸

In both cities, all the elements that the World Heritage Committee has recognized as necessary to express their OUV can be found within the property boundaries — 51 hectares for Porto and 52.18 for Bologna. In Porto, the property coincides with a portion of the city, also covering the municipalities of Porto and Vila Nova de Gaia, following the perimeter of the medieval town within the Fernandine walls (14th century) and it includes important historic buildings, recognised as a “testimony to the development over the past thousand years of a European city that looks outward to the sea for its cultural and commercial links” (UNESCO 1996: 11; Porto City Council 2021: 13) (FIG. 3). In the case of Bologna, the core zone does not identify a portion of the city, but 12 components of the 62 kilometres of porticoes mapped throughout the entire Municipality of Bologna, selected as representatives of the forms that the concept of “portico” has taken on according to “different typologies, urban and social functions and chronological phases”

7 The revised name of the site clarifies its attributes, but these were already included in the description of the first WHL listing (UNESCO, 2016).

8 For more information on the UNESCO sites visit: <https://whc.UNESCO.org/en/list/755> (Porto) and <https://whc.UNESCO.org/en/list/1650> (Bologna) [Accessed: 28 February 2023].



(UNESCO 2021a: 390; Comune di Bologna 2021a: 21-22) (FIG. 4). Nearly identical in size, the two properties differ in conception, with the Porto one being “punctual” and the Bologna one “serial.”

In addition, both core zones have protective buffer zones. They are different in size — 186 hectares for Porto and 1,125.62 for Bologna — but they both encompass the most representative features of their cultural landscapes, namely the bend of the Douro River and part of its network of bridges for the Portuguese WHS, and the diffuse network of porticoes of old and present-day Bologna. Despite their diversity, buffer zones are strategic for the sustainable future of these cities, transforming only apparently accessory areas (the buffer zones) into interstitial zones capable of multiplying the physical, infrastructural, visual, and perceptual relations with the surrounding area.

FIG. 4 Bologna. Twelve component parts of the Italian World Heritage Site (G. Bianchi). Comune di Bologna.

— THE BUFFER ZONES OF PORTO AND BOLOGNA AS WORLD HERITAGE SITES [CM]

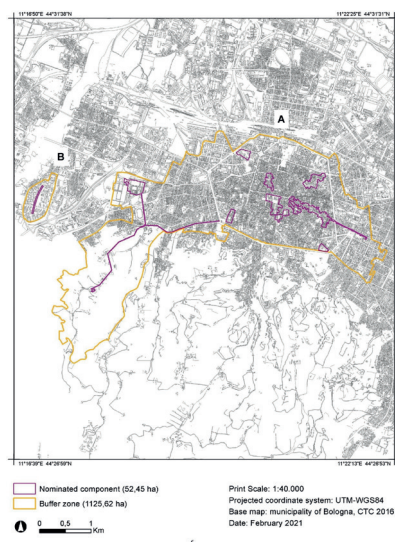
The concept of the “buffer zone” is a complex one, subject to ongoing reflection because of its importance in the protection policies for World Heritage. The buffer zone was first described in the Operational Guidelines for the Implementation of the World Heritage Committee (UNESCO 2023) as one of the elements to be considered when drafting a WHS application and defined as “the natural or man-made surroundings that influence the physical state of the property or the way in which the property is perceived,” to be introduced where appropriate and feasible after the relevant technical studies, as additional protection of the core zone (UNESCO 1977: 16).

Throughout the World Heritage Convention implementation process (UNESCO 1972), this concept has undergone further development — as highlighted by the latest changes made to the “Operational Guidelines”, which is now in its 25th edition (UNESCO 2021b) — given its strategic function for both cultural and natural sites.



FIG. 5 Porto. World Heritage Site *Historic Centre of Oporto, Luiz I Bridge and Monastery of Serra do Pilar*: core and buffer zones (<https://whc.unesco.org/en/list/>, Accessed: 05 March 2023).

FIG. 6 Bologna. World Heritage Site *The Porticoes of Bologna*: core and buffer zones (<https://whc.unesco.org/en/list/>, Accessed: 05 March 2023).



Among the landmark documents on the subject is undoubtedly the paper “World Heritage and Buffer Zones”, published in the aftermath of the above-mentioned Davos Meeting in 2008, which brought together the World Heritage Centre (WHC), experts from ICOMOS, ICCROM and IUNC, as advisory bodies to the Convention, and representatives of other programs and conventions. The meeting’s recommendations reiterated the need to prepare nominations that include, in addition to the property, the evaluation of a suitable buffer zone which, although not mandatory and not including the Outstanding Universal Value (OUV), provides additional protection for the OUV and the integrity of the core zone. Therefore, the buffer zone is confirmed as a complementary and dynamic tool that can be reviewed after listing and whose successful functioning strictly depends on the ability of site management bodies and local authorities to establish relations with ordinary conservation and urban planning tools (Martin and Piatti 2009: 167-169).

The previously mentioned features of the Porto and Bologna properties, identified as “punctual” and “serial” respectively, influenced the definition of the corresponding buffer zones, in terms of form and management rationale (FIGG. 5-6).

The buffer zone of the Portuguese site seamlessly envelops the core zone. As specified in the Management Plan, the existence of this area is functional for the protection of the property, which therefore consists of

the south bank of the Douro River, the area corresponding to the entire “basin” of the Port wine warehouses, since it was considered that the river-front area in Vila Nova de Gaia is a natural complement to the buffer zone, and which in the historical and architectural layout plan maintains many affinities with the classified area; and on the north bank, beyond the limits of the entire historic Centre, the peripheral blocks of the Avenida dos Aliados, Praça Carlos Alberto, Jardim do Carregal, Miragaia, Monchique and Fontainhas were inserted. (Câmara Municipal do Porto and Porto Vivo 2010: 43-44; Porto City Council 2021: 14)

For the Bologna site, as stated in the application dossier, there are two buffer zones: the first one, more extensive, includes 11 of the 12 component parts that comprise the property, encompassing the city's historic centre and part of the surrounding areas (buffer zone A). On the other hand, the second, smaller buffer zone surrounds the contemporary arcaded building of the Barca district, located in a suburban area of the city (buffer zone B) (UNESCO 2021a: 392; Comune di Bologna 2021b: 3). The perimeters of the buffer zones were defined in relation to existing legal and planning instruments and to maintain the visual integrity of their components. Consequently, the buffer zones and the historic city of Bologna, as defined in the 2007 Municipal Structural Plan (PSC) and the 2020 General Urban Plan (PUG) almost coincide. This enabled coordination between UNESCO's property management and heritage protection and the local management authorities.⁹

— PROJECTS AND ACTION LINES FOR
THE BUFFER ZONES OF PORTO AND BOLOGNA
IN THEIR MANAGEMENT PLANS [AU]

The projects and actions involving the buffer zones of the cities of Porto and Bologna reflect the vision of their respective Management Plans (MP), both in their analysis and design phases. As often happens, these Plans are structured around common strategic areas and objectives, in accordance with the attributes and values of the site to be protected.

The 5 strategic axes of the Bologna site around which the MP is conceived include heritage “knowledge,” “conservation,” “quality of life,” “social inclusion” and “cultural and economic promotion” (Comune di Bologna 2021a: 62). In Porto, the strategic axes of the Plan include “heritage,” “population, housing and community,” “economy” and “environment and mobility” (Porto City Council 2021: 40).

Although slightly different, both plans aim to promote and manage the site in compliance with conservation and sustainable development objectives, and with the idea that the WHS dynamics should be governed and never accepted uncritically. In the case of Bologna, it means innovatively promoting and managing the ancient built heritage while considering the dynamism of its inhabitants and without disregarding sustainable economic and environmental development and inclusiveness. In Porto,

9 In this respect, it is interesting to consider the neighbouring UNESCO site of Ravenna (ID788/1996) in Italy, which implemented different choices in defining the buffer zone. The site is “serial” like that of the Porticoes in Bologna and includes the city's 8 Early Christian Monuments. For each of them, a buffer zone has been defined, resulting in 8 serial components and 8 buffer zones. This makes it very difficult to implement coordinated and shared policies for the protection and promotion of the site, especially in relation to the relevant urban context. For more information, see: <https://whc.unesco.org/en/list/788/maps/> [Accessed: 05 March 2023].



FIG. 7 Bologna. Projects and action lines for the buffer zones in the Management Plan (in Comune di Bologna 2021a: 90, 120).

the goal is to revitalize the city's social, economic and heritage potential for the local community, without forgetting the value and use (and/or disuse and abandonment) of heritage, in its tangible and intangible aspects (Tarrafa Silva, Cunha Ferreira and Pinto 2018: 50).

As the existing literature points out, and as the Management Plans of the sites under consideration confirm, the buffer zone is an "additional management tool" rather than a part of the site itself (Martin and Piatti 2009: 46-47) and it is therefore way more flexible. Nevertheless, it is interesting to note how, in both cases, the projects and lines of action, referring to core and buffer zones, turn out to be closely related on a cultural and development level.

In Bologna, where the buffer zone coincides with the historic city itself, out of 26 projects and lines of action in the management plan, as many as 14 include the buffer zone with projects for the enhancement of the same strategic axes. Such actions and projects include better knowledge of the porticoes with campaigns aimed at different age groups (projects No. 1, 2), the study of the porticoes for preservation and management with indications and guidelines for their maintenance as a common good (projects No. 7, 9, 10, 13), the re-appropriation and strengthening of the sense of belonging of the Porticoes to the social space, and respect and maintenance education initiatives (projects No. 12, 22, 24 and 25) (Comune di Bologna 2021a: 69-125). Well before the successful outcome of the UNESCO application, the municipality of Bologna had implemented collaborations between citizens and the public administration for the maintenance and regeneration of common urban property, including specific provisions for the shared management of publicly used private spaces, like the Porticoes (Comune di Bologna 2019a) (FIG. 7).

While in Bologna heritage education policies and a sense of belonging are well-established and shared even in the buffer zones, this is unfortunately not the case in Porto. Here, the presence in the core zone of a greater number of heritage buildings (together, perhaps, with a conception of heritage less holistic than in Italy) led to a greater number of educational events in the core rather than in the buffer zone, as reported in the Management Plan (Porto City Council 2021: 128).¹⁰ The perhaps more "traditional" view of the buffer zone in Porto, although always understood as strategic in the WHS management policies, is also documented by the fact that only three out of the 25 action lines of the management plan explicitly refer to the buffer zone. This is mentioned in relation to the need to strengthen forms of integrated planning attentive to the preservation of the historic built heritage of the city as a whole (project No. 6), and to the need to attract businesses of appropriate size and specific expertise to this part of the city (project No. 46).

It should also be said that, while in Porto the buffer zone is less affected than the historic centre by abandonment and consequent degradation and

10 In the Management Plan, heritage awareness programmes carried out by the Municipality of Porto are described as related to cultural monuments/cultural facilities within the limits of the core zone. The only exceptions are the Carlos Alberto Theatre and the Port Wine Cellars located in the buffer zone of the Municipality of Vila Nova de Gaia (Porto City Council 2021: 128).

substantial transformation of the built-up area (Porto City Council 2021: 144), in Bologna phenomena of the same nature and intensity are absent.

However, there seems to be a unified strategic vision to protect the value of the Historic Centre of Porto as a World Heritage (HCPWH) both in the core and the buffer zone, also considering the expropriation policies pursued by the municipality to increase the number of dwellings under long-term lease: from 2016 to 2020, both zones have been affected by expropriations to slow down, or rather halt, the proliferation of tourist facilities.¹¹

As per the promotion of different forms of mobility, the creation of mechanised routes in Porto's buffer zone is enabling the regeneration of marginal areas while being beneficial for the mobility of the urban centre itself (Porto City Council 2021: 191).

The importance of integrating UNESCO Management Plans with local planning and financing tools is emphasised frequently in the documents on Porto and Bologna's WHL nominations. Such integration is never limited to the property alone but extends to its relationship with the buffer zone.

Since 1996, in the City of Porto, several limits on actions have been defined, such as the Critical Area for Urban Recovery and Reconversion (ACRRU), and the Priority Intervention Zone (ZIP), which includes the World Heritage historic Centre of Porto and its buffer zone, as explained in the Porto City Council and Porto Vivo 2008 Management Plan (Porto City Council 2021: 132).

The same thing happened in Bologna, where specific protection projects and provisions for the active preservation and enhancement of the Historic Urban Landscape¹² had already been included in the regulations of the new General Urban Plan (2020) and the Building Regulations (2021). In other words, they had already been conceived when drafting the Management Plan and became operational even before the Porticoes application was accepted (Orioli and Mariotti 2022: 137).

11 In four years, the Porto City Council has exercised its pre-emption right to purchase 17 buildings within the core zone, and 12 in the buffer zone (Porto City Council 2021: 157).

12 We refer here to operational documents such as "Istruzioni per la cura e l'uso dei portici" (Instructions to maintain and use the Porticoes) and the "Regolamento per l'esercizio del commercio nelle aree urbane di particolare valore culturale" (Regulation for traders in areas of Bologna of specific cultural value) (Comune di Bologna 2019a; 2019b).

Avoiding further investigation into the relationships between ordinary planning instruments and UNESCO ones, it is interesting to point out that, in the cases analysed, the Management Plans of Porto and Bologna more or less explicitly recall the need for studies on views and perceptual systems for the management of heritage and its complexity (Porto City Council 2021: 14; Ugolini and Pretelli 2020: 165-168) (FIG. 8).

The perceptual dimension substantially contributes, as enunciated by The European Landscape Convention (Council of Europe 2000), to the definition of urban identity not only for citizens but also for tourists. The historic urban landscape has long been understood and investigated as a set of interrelationships between natural, anthropic, economic, social, cultural-historical, aesthetic-formal systems and geomorphological systems.

In the last twenty years, attention to perception as closely related to landscape quality has increased, especially since the publication of the Recommendations on the Historic Urban Landscape (UNESCO 2011). In the same years, English Heritage published two documents on the “context” of heritage and its related perceptual and visual aspects (English Heritage 2011a; 2011b), testifying to the urgency of the issue and the need for common and shared assessment methods, rather than rules or intervention models (Cassatella 2014: 9).

In Italy, one of the first pilot experiences in this regard was the guidelines by the Piedmont region for the analysis, protection and enhancement of the scenic-perceptual aspects of landscapes¹³ (Cassatella 2014) and the

FIG. 8 Historical views of the city of Bologna and Porto (in Sarti 2021: 15; 19th century antique print).



13 Developed by the Italian Ministry of Cultural Heritage, Activities and Tourism – Regional Directorate for Cultural and Landscape Heritage of Piedmont, the Directorate for Strategic Planning, Spatial Policy and Construction, the inter-university Department of Science, Planning and Land Policies, and by the Politecnico and the University of Turin.

research with similar aims carried out within the Action Plan for the Management of the Florence UNESCO site¹⁴ (Capitanio 2015).

“Pictures” of all historic cities, like Bologna and Porto, can be taken from a sequential, ground-level point of view, resulting from walking the city’s streets, or from a set of privileged, mostly overhead viewpoints like the hills, towers, bridges and buildings that dominate the city. The two are complementary: the first ones, in sequence but partial as the result of walking, enable us to register the features of the cities’ architectures, their details and materials while the second ones, taking advantage of height, provide a more aggregated view to better grasp the buildings’ volumes and roofs as well as the correlation with all the elements that define the urban fabric.

In the literature on perceptual landscape analysis (Cassatella 2014: 16-25; Capitanio 2015: 21), the qualitative aspects of a site are identified, operationally, by:

- viewpoints, the so-called “belvedere,” which are historically defined or planned (even recently), providing an overall view of the study area;
- routes of landscape-environmental interest and/or connections (like railroads) among places of historical-artistic relevance, with potential or proclaimed tourist and hiking value;
- waterways from which to observe landscapes of great value;
- optical telescopes that offer perspective views of elements of historical, symbolic and landscape significance and established iconography views, such as prints and historical postcards.¹⁵

For Bologna and Porto, it is the hills that define the urban landscape: in Bologna as a “frame” and natural backdrop marked by taller historical-architectural buildings, public parks and monumental trees, and in Porto as a “complement” to the site, against which it has evolved dynamically over time.

The hills are a strategic ecological and environmental asset, but also an aesthetic and perceptive one: it is no coincidence that they have long been a preferential observatory of cities, inspiring many iconographic representations (paintings, engravings, prints, photographs) thanks to which, even today, we can appreciate the evolution of urban areas (FIG. 9).

The observation points of Villa Ghigi, Villa Aldini, San Michele in Bosco and Villa Baruzziana in Bologna (FIGG. 10-11) and the well-known Miradouro da Serra do Pilar or from the Castle of Gaia place, in Porto offer historically established views from the hills over the city.

Both cities, although with different visual scopes – at times 360°, at times oriented – feature several observation points: in Bologna we have the towers Specola, degli Asinelli, and dell’Orologio, the terraces of San

14 From 2007 to 2014, conventions and research contracts were signed between the Department of Architecture of the University and the Municipality of Florence regarding the Florence UNESCO site.

15 It should be noted that for the places mentioned here, it is possible to define elements of “visual attraction,” that is historical landscapes recognised as valuable by communities, both on a local and national/international level; elements of “visual detraction” that are incompatible with the context and its qualities and constitute a source of degradation and weakness, and the bands of perceptual-visual interruption, bifurcations or restrictions (Capitanio 2015: 21).

FIG. 9 Bologna. Map of the main viewpoints (in Sarti 2021: 13).

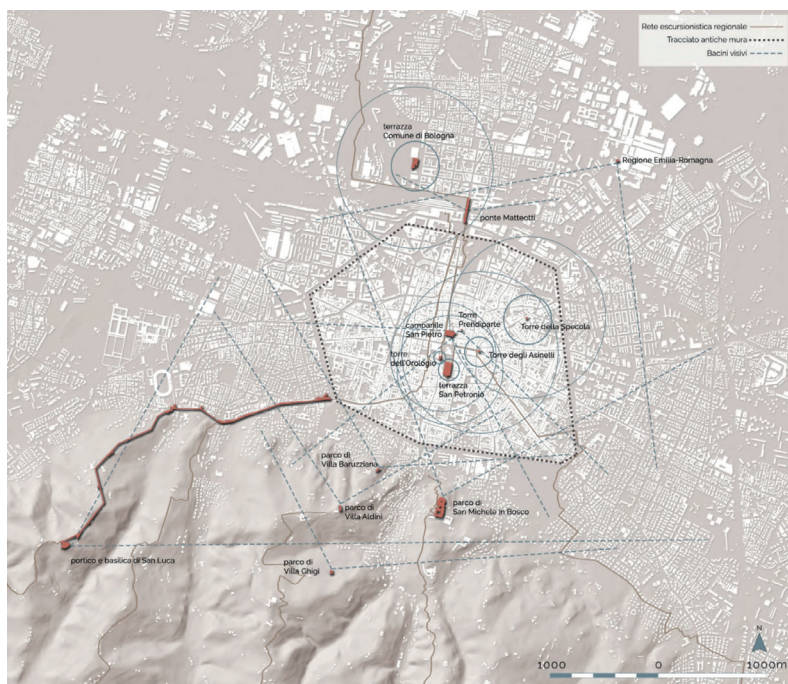


FIG. 10 Bologna. View of the city from San Michele in Bosco: old print and current photo (in Sarti 2021: 17-18).



FIG. 11 Bologna. View of the city from the park of Villa Aldini and from the terrace of the Basilica of San Petronio (in Sarti 2021: 14).



Petronio and the bell tower of San Pietro (FIG. 11)¹⁶; in Porto the Miradouro da Vitória, the Torre dos Cérigos and the Terreiro da Sé with the Casa dos Vinte e Quatro by Fernando Távora, just to mention a few (FIG. 12).

We should also mention routes of landscape-environmental interest like, in Bologna, the Portico of San Luca, which connects Porta Saragozza to the Sanctuary of Our Lady of San Luca (FIG. 13) and, in Porto, the Rua das Aldas that leads to Ribeira, the Ponte Luis I that leads up to the heart of the urban fabric and the views from the Funicular dos Guindais that connects the riverfront with the upper part of the city (FIG. 14).

Such articulated perceptions of the urban fabric deserve special attention in terms of preservation, conservation and dynamic change.

In this regard, Porto's Management Plan recognises the importance of the so-called "fifth elevation," i.e., roofs and skylights, due to their spatial layering and articulation, going all the way down to the banks of the Douro River (Porto City Council 2021: 78). In Bologna, recent studies have detailed existing regulations to preserve the key features of the city's skyline — like taller buildings for example — and have given indications to better regulate roofing and their accessory elements (Sarti 2021: 70-96).

The scenic-perceptual aspects described here are not only important on a tourist-recreational and identity-cultural level, but they can (and should) be included in enhancement projects and become assets for the study and monitoring of landscape transformations and valuable support tools in the conservation and development process of the Bologna and Porto WHS.

CONCLUSION [CM, AU]

The main purpose of this contribution was to investigate and critically discuss two experiences, that of the World Heritage Sites of Porto and Bologna. Authors considered the role and potential of buffer zones in the management processes of world heritage sites and, more generally, of historic urban landscapes, which can also help achieve a much sought-after balance between heritage conservation and sustainable urban development.

Taking a comprehensive and integrated approach as recommended by the major world heritage institutions, the proposed reflections investigated some of the operational tools for the reading, monitoring and management of heritage, namely perceptual studies (UNESCO 2005). Visual impact analyses, which have long been relevant



FIG. 12 Porto. Casa dos Vinte e Quatro by Fernando Távora, 2022.



FIG. 13 Bologna. The Portico of San Luca: historical postcard and contemporary view (in Sarti 2021: 51, 57).

16 A recent research project, carried out by the University and the Municipality of Bologna, has identified 14 viewpoints for the city of Bologna (Sarti 2021).



FIG. 14 Porto. Funicular dos Guindais (<https://de.wikipedia.org/>, Accessed: 30 March 2023).

to landscape culture, have the potential to qualitatively support urban transformation and contextualise architecture within the built environment while preserving its featuring elements and relations with the surrounding area. At the same time, such surveys can both assist in the identification of the values of a UNESCO site at the application stage and contribute to the integration of its management tools, reinforcing the multiple relationships between core zones and buffer zones and between buffer zones and their areas of reference.

Although to date such tools do not explicitly appear in the Management Plans of the investigated sites yet, the fact that they are recurrently mentioned and wished for, coupled with the vitality of ongoing research on the topic, suggest that they will soon be included in the plans' updates. Understanding (and managing) a Historic Urban Landscape remains a complex task with diverse implications (from perceptual and scenic aspects to more purely naturalistic-ecological and historical-cultural ones) that require multidisciplinary skills to understand the signs of history and the human-environment relationship, but also a transdisciplinary approach to interpret and manage its complexity.

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