



Recovering memory of landscape – the role of NGOs in the rehabilitation of fortified landscapes.

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Abstract

This paper deals with the subject of the rehabilitation of military heritage landscapes and the role of the non-governmental organizations successful and experienced in this field. It summarises research carried out for a doctoral thesis, the practical goal of which was good practice dissemination and the development of a methodology for the management of such landscapes. Defences of many ages and types have left a visible mark on the European continent and its landscape. Such heritage may encourage tourism development and bring economic benefits for many places and regions across Europe. Fortifications are fascinating tourist attractions because of their scenic value and context. This article examines a set of case studies of rehabilitation of European fortifications dating from the eighteenth to the twentieth century and presents an analysis of NGO experiences. Emphasis is put above all on the actions undertaken by the NGOs which depended on the type of fortification being rehabilitated. The paper also considers the organizational profile of the NGOs studied: number of members, area of activity, the aims of work and practical experience: both success and failure. An analysis of possible roles for the agencies involved is carried out and recommendations for good practice are made. Findings confirm that non-governmental organizations can play a vital role in successful rehabilitation of fortified landscapes.

Key words: military heritage landscape, fortified landscape, NGOs, rehabilitation, tourism

Background – the reasons for undertaking the study.

Defences of many ages and types have left their visible mark on the European continent and its landscape. Such heritage very often becomes the theme of cultural routes, which may encourage tourism development and bring

economic benefits for many places and regions across Europe.¹ Fortification becomes a fascinating tourist attraction because of the qualities of its setting, scenic context and view connections and landscape value regardless of the geographic location: irrespective of whether the fortification is in a historic town centre or in a specific picturesque location on a mountain hilltop. For modern defences constructed from the dawn of the eighteenth century, landscape is also an important frame of reference (see Figure 1). Following the development of longer range artillery, defences had to be built outside towns to keep the attack at a safe distance. In this way the detached forts evolved as a direct consequence of locating the defensive structures beyond the tight enclosures of the bastioned trace, which evolved during the age of black powder dating back to the mid fifteenth century. Later on, defences developed into large scale structures, where a citadel or a central fort formed the core surrounded by a ring of forts and supplementary works in-between and other types of military infrastructure. An integral part of defence systems were open spaces such as esplanades or *glacis*, which altogether formed huge ensembles. Dispersed fortification consisting of hundreds of pillboxes and strongpoints connected with underground tunnels and field fortification were built after the experiences of World War I and are called fortified areas or regions, and this tells a lot about their immense scale: almost six hundred pillboxes make up the French Maginot line stretching out more than four hundred and fifty kilometres. Fortification of the Festungsfront im Oder-Warthe Bogen built in the 1930s (now on Polish territory) cover eight thousand square kilometres.² The tight link to landscape combined with might, mystery and intriguing history make fortification ensembles a potential magnet for sustainable adventure tourism. However, despite the growing interest in fortification tourism, many defences suffer damage and neglect resulting from the lack of contemporary function



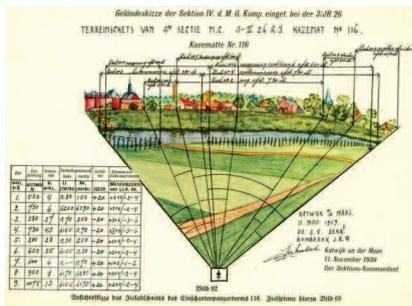
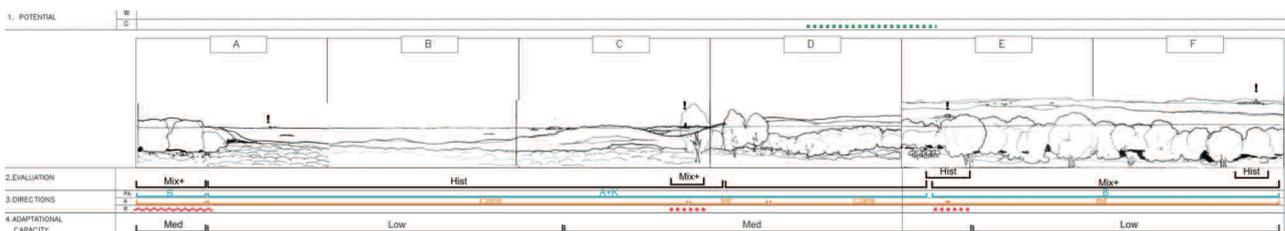


Figure 1 Visual landscape context of permanent fortifications illustrated by: above: sectors of fire of the armoured turret No 116 in Katwijk an der Maas⁴; right: targets marked on a panoramic sketch above an embrasure in Giacone battery of the Monte Madonna position on Veli Brijun island, Croatia⁵; below: panoramas as element of integrated landscape record card of the Paravia West work in fortified group Barbariga (Croatia).⁶

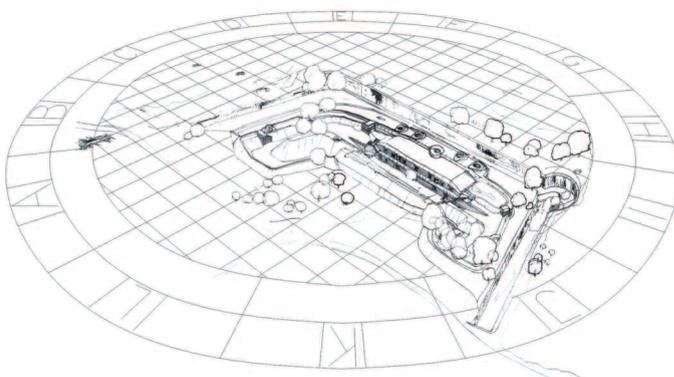


1. POTENTIAL	WORKS	Close defence armour fort land front of Barbariga Group
	GREENERY	NOT RESEARCHED SUBJECT

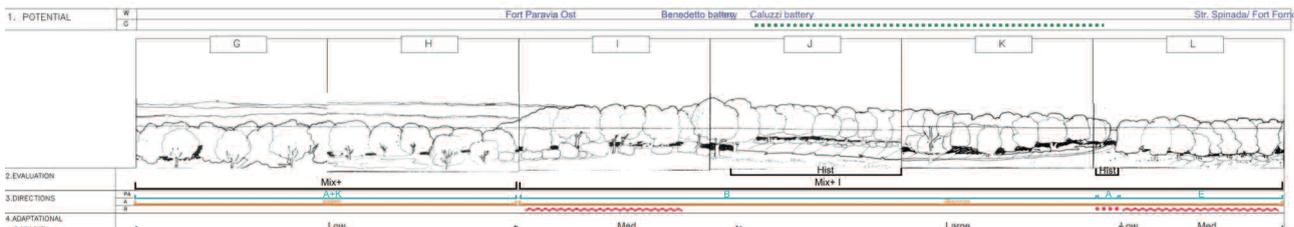
2. EVALUATION	H HISTORIC	
	M MIXED (+/-)	
	C CONTEMPORARY (+/-)	

3. DIRECTIONS	PROTECTION AREA	A STRICT B PARTIAL C VIEW K LANDSCAPE
	ACTIONS	CONSERVATION RECONSTRUCTION RECOMPOSITION

3. DIRECTIONS	RANGE OF WORKS	MAINTENANCE RECONSTRUCTION CHANGE OF SHAPE REMOVAL
	ADAPTATIONAL CAPACITY	LARGE MEDIUM LOW NONE



object	Fort Paravia West
vertical drawing	Close defence fort/ armour fort
panorama	Piotr Bujas Piotr Bujas/Zdenko Dubovec id view: Piotr Leonowicz



and management. Moreover, many modern defences represent unwanted heritage or at least difficult to understand for ordinary people.³ In many places fortified heritage needs to discover its hidden potential. For

example the twelve French cities fortified by Vauban in the seventeenth century were only inscribed on the UNESCO World Heritage List in July 2008. And that is why how to rehabilitate fortified landscape is a bothering question.

Introduction.

While military structures and buildings of ancient times, the Middle Ages or even the Renaissance gained general appreciation and popularity, modern fortification especially of the nineteenth and twentieth century have until recently been a subject only of specialist research.⁷ This situation has changed dramatically in recent decades as many associations and foundations have come into being with the objective of military heritage protection. Also, a growing number of researchers have carried out scientific projects. Particularly interesting within this movement are re-enactment groups, which have grown in number and popularity in Poland as well as elsewhere. Just to mention a few examples: during the celebration of the battle for the town Nysa in 2008, almost four hundred military history fans from Poland, the Czech Republic, Hungary and Italy with historic costumes and weapons took part in the reconstruction while almost five thousand spectators enjoyed the event. Reconstruction of the battle from early September 1939 near Wry and Gostyń, organised by the Pro Fortalicium association, draws each year a few thousand members of the interested public. Military heritage landscape rehabilitation is a challenge since nowadays permanent fortification structures have lost their purpose and field fortifications, if visible, clearly testify to the retention of time depth in the landscape but are often not legible to people without specific historic knowledge.

Adaptation of former defences to contemporary use is costly, and in each case requires a bespoke approach tailored to the type of the defence work, time and epoch of its construction and also on the nature of its current civilian context. There is no doubt that to do so specialist historic and conservation knowledge,⁸ combined with design talent is needed. The conservation principles developed and widely accepted by heritage authorities and fortification history experts across Europe, officially formulated in the draft ICOFORT Charter on Fortifications, are of particular importance.⁹ What is more, considerable management skills are also a must. To achieve real and long-lasting effects one must take into account that the conservation should ensure sustainable, economically viable, use as state budgets for heritage protection are usually limited,¹⁰ especially in central European countries such as Poland. The fact that *Architectura militaris* has a growing number of enthusiasts, who form non-governmental voluntary

organisations, which effectively protect and manage fortified heritage in democratic countries should be taken advantage of. Such organisations can be a real partners for heritage professionals and local administrations in Poland and elsewhere. When planning durable outcomes for revitalisation it is necessary to stress the importance of all social aspects of this process, such as public participation and acceptance. The hypothesis of this study is that a non-governmental organisation may be an effective initiator and actor taking part and managing revitalisation of fortified heritage landscape.

State of the art.

Examination of fortified landscape rehabilitation undertaken by NGOs requires interdisciplinary research to explore several complementary aspects of the subject. Military history is a primary research sub-field. This vast topic is well researched and is a well established discipline with a great deal of both academic and popular literature.¹¹ The oldest information comes from historic fortification treatises (for example the works of Dürer¹² and Vauban¹³), instructions and manuals (like those by Mauritz von Brunner¹⁴ or newer works by Besiekierski et al.¹⁵). There are also a good many contemporary books on fortification history¹⁶ as well as special tourist guides.¹⁷ The term fortified landscape was first introduced in Poland by the late Professor Janusz Bogdanowski¹⁸ whose research was pioneering¹⁹ and stressed the need for protection and conservation of historic defences together with their landscape context. This current in landscape architecture and heritage conservation remains vital in Poland today. The state of the art regarding the fortification on Polish territory is continues to be examined by researchers like Krzysztof Biskup²⁰ and Piotr Molski.²¹ Architects also deal with the methodology of integrated protection²² and registration of fortified landscapes.²³ There is also constantly growing body of substantial research on the design and technical aspects of fortification adaptation possibilities.²⁴ Landscape architects examine the role of composed planting connected with nineteenth and early twentieth century fortification,²⁵ while others take a closer look at the influence of the defences on the contemporary urban development of former fortress cities.²⁶

In general non-governmental organisations are subject to sociological study. Several NGOs work in the field of heritage conservation, in addition there are also social benefit organisations carrying out research on and

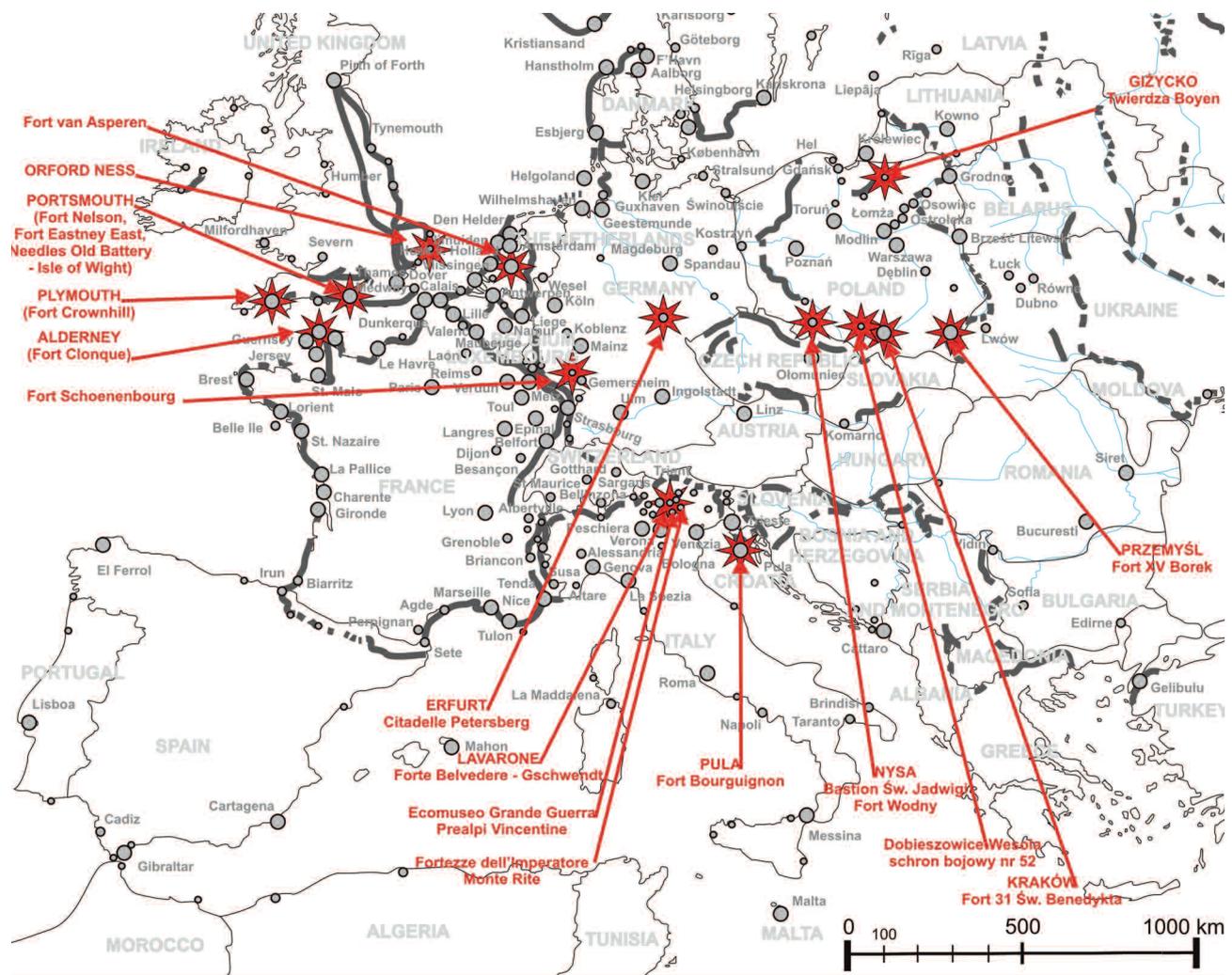


Figure 2 Location of the case studies on the map of European defences built between 1800-1945 (drawing by A. Staniewska 2009, basing on map courtesy of Rudi Rolf)

renovating defences (albeit this not the sole subject of their activity). While major organisations such as ICOMOS, Europa Nostra or the National Trust are well known, smaller specialised fortification NGOs have never been thoroughly researched. The topic of heritage management, although relatively new, has become important in recent years and is also rich in writing.²⁷ In-depth study on issues that arise from this meeting of disciplines, requiring knowledge from each of above mentioned branches, has never been made. The work, on which this paper is based, aimed to cover this scientific gap.

Material and Methods.

The area of study was Europe (see Figure 2) with a special focus on Polish conditions. The defences investigated date

from the eighteenth to the twentieth century. The case studies were chosen from rehabilitation exercises where the process of conservation had included both built form and landscape context and, in addition, where an NGO had played a leading or important role.

Information on NGOs and their activities was then collected through interviews, web research and constitution analysis. A questionnaire was routinely completed for each NGO. Data collected included addresses, number of members, contact persons, mission, number of sites taken care of and optionally numbers in charity/national registers.

Then, based on this information about the organisations, case studies were chosen from examples where going beyond mere physical redressing of the architectural



substance had been successful. Here qualitative research was carried out and each case was described according to uniform guidelines. The important aspects were: defences and their significance, natural and landscape resources, actions undertaken, the ways of rehabilitation, architectural interventions, social and economic and management aspects. In some cases a few interesting facts from history were added. The case studies begin with the map showing location and ends up with a short résumé. Natural and landscape resources were here understood as the environmental qualities of the setting (such as nature protection areas, protected habitats, greenery, specific

landform) and its scenic values (long distance views, outlook points, interesting panorama composition). Furthermore, comparative analysis of drawings, pictures, projects and plans was carried out. The author also used participatory observation as a method.

In order to estimate the potential of the selected sites for possible future tourist use and to define the starting point for strategic management a SWOT analysis (strengths, weaknesses, opportunities and threats) was carried out.

The case studies cover examples of eighteen fortification sites managed by sixteen organisations working in Poland, the United Kingdom, the Netherlands,

Table 1. A list of NGOs and matching case studies

NGO name	country	Case study name
1 <i>Towarzystwo Przyjaciół Fortyfikacji (TPF) / Association of Fortification Friends</i>	PL	<i>Bastion Św. Jadwigi and Fort Wodny, Fortress Nysa</i>
2 <i>Association Pro Fortalicium</i>	PL	<i>Dobieszowice – Polish strongpoint No 52 of Fortified Region Silesia</i>
3 <i>Stowarzyszenie 3-go Historycznego Galicyjskiego Pułku Artylerii Fortecznej im. Księcia Kinsky'ego / Association of the Duke Kinsky 3rd Historic Galician Fortress Artillery Regiment</i>	PL	<i>Fort Borek, Przemyśl</i>
4 <i>Ognisko TKKF Przyjaciół Konika - non-profit equestrian club</i>	PL	<i>Fort No. 49¼ “Grębałów”</i>
5 The National Trust	UK	<i>Needles Old Battery, Isle of Wight</i>
	UK	<i>Orford Ness, Suffolk</i>
6 Palmerston Forts Society	UK	<i>Fort Nelson, Portsmouth</i>
	UK	<i>Eastney Fort East, Portsmouth</i>
7 The Landmark Trust	UK	<i>Fort Clonque, Alderney</i>
8 Stichting Fort van Asperen	NL	<i>Fort van Asperen, Asperen</i>
9 Freunde der Citadelle Petersberg zu Erfurt	DE	<i>Citadelle Petersberg, Erfurt</i>
10 l'Association des Amis de la Ligne Maginot d'Alsace (A.A.L.M.A.)	FR	<i>Fort Schoenenbourg, Haguenau, Hunsbach</i>
11 Fondazione Belvedere - Gschwendt	IT	<i>Forte Belvedere – Werk Gschwendt, Folgaria-Lavarone</i>
12 Stichting Menno van Coehoorn	NL	<i>Nationwide research organisation</i>
13 Deutsche Gesellschaft für Festungsforschung	DE	<i>Nationwide research organisation</i>
14 Small local associations and tourist offices	IT	<i>Project Ecomuseo Grande Guerra Prealpi Vicentine</i>
15 Reinhold Messner Foundation and local tourist offices and authorities in South Tirol	IT	<i>Project Fortezze Dell'Imperatore</i>
16 Nacionalna udruga za fortifikacije - Pula (NUF - Pula)	HR	<i>Fort Bourguignon, Pula</i>
17 Stowarzyszenie Instytut Sztuki/ Association the Art Institute	PL	<i>Fort Św. Benedykt, Kraków</i>
18 Towarzystwo Miłośników Twierdzy Boyen/ Association of Fortress Boyen Enthusiasts	PL	<i>Feste Boyen, Giżycko</i>



Germany, France and Italy (Table 1). Two organisations are nationwide research bodies. Three cases from which lessons should be learned, were examined. These examples initially portended well, with time however, they failed.

Results.

A typology of NGOs dealing with fortified landscape protection and rehabilitation follows.

Typically a group of fortification enthusiasts in Poland will form an association (one of the types of NGO described by Polish law) drawing together 20 to 30 people of various professions, often however, students, historians, architects, landscape architects and engineers. Most of those groups act locally on a regional level. They often have tight budgets, since they raise funds through public

collection, which only brings in moderate sums. They rarely run any business to generate income for their own purposes, although according to Polish law on associations and public benefit organisations, they have the right to do so.

Social benefit organisations active in the field of fortified landscape guardianship (in Poland and elsewhere) may in general be divided into eight types, according to their profile and sort of activities undertaken (N1-N8 see Table 2, some of them are not mentioned in the case studies as they do not take care of any particular sites but play different important roles).

It is worth mentioning, that there is a considerable difference between research organisations, which usually act sometimes even on the European level, and small local groups. Fortification researchers have immense

Table 2. Typology of NGOs acting in favour of fortified landscape rehabilitation.

N	Organisation type	Example (country shortcut)	Activity range	Number of members
N1	Scientific research and popularizing fortification, heritage conservation and management	- Towarzystwo Przyjaciół Fortyfikacji (TPF) / Association of Fortification Friends (PL) - Fortress Study Group (UK) - Deutsche Gesellschaft für Festungsforschung DGF (DE) - Stichting Menno van Coehoorn (NL) - the National Trust (UK) - the Landmark Trust (UK)	Wide: all-European, nationwide	large – up to few hundred members
N2	Do-it-yourself experts	Association Pro Fortalicium (PL)	Local	Small
N3	Tourism and sightseeing – tourists' clubs	Oddział Wojskowy PTTK (PL)/ Military Branch of Polish Tourist Association	Regional	Moderate, periodically increasing
N4	Re-enactment groups	Stowarzyszenia 3-go Historycznego Galicyjskiego Pułku Artylerii Fortecznej im. Księcia Kinsky'ego/ Association of the Duke Kinsky 3rd Historic Galician Fortress Artillery Regiment (PL)	Local, sometimes travel to take part in the events (battle reconstructions) abroad	Small groups, growing number of groups
N5	Explorers	Bunkrowcy (PL)/ Bunkerites of Poland	Regional, usually informal	Small
N6	Memorial	The Normandy landing veterans	Scattered, meet in the regions of the battlefields	Small
N7	Ecological	Salamandra (PL), Salamandra Association for Nature Protection	Regional	Small
N8	Neutral	Instytut Sztuki (PL), Foundation Werk Belvedere Gschwendt (IT), Ognisko TKKF <i>Przyjaciół Konika</i> - non-profit equestrian club (PL)	Local	Small

knowledge of the subject and carry out research in the archives and publish their own books or periodicals (like *The Casemate* or *FORT* by the Fortress Study Group). They are also often advisors for smaller associations or provide expert opinions and help to get funding to support rehabilitation activities implemented on the ground by other organizations (like *Stichting Menno van Coehoorn* in the Netherlands). While nationwide organisations try to raise awareness, acceptance and knowledge by lobbying, press work and scientific research, small groups usually focus on the chosen period of fortification history or particular structure and on implementing specific projects often working on site.

Fortified landscape typology.

Fortified landscape types in turn, if analysed paying special attention to rehabilitation are defined not only from the type of defences and the period of their construction. Main difficulty lies in their scale and complexity. While rehabilitation of a single example of permanent fortification such as pillboxes from WWII is feasible for a small NGO, it is far more difficult to show the context of the whole fortified region or defence line. Older forts like citadels or parts of the ring fortresses also face the challenge of preserving integrity of landscape. Moreover, successful management of even a single example of these types is often extremely challenging, if not impossible, for a single small association. The sort of actions undertaken by NGOs and their range is more dependant on the landscape context and proximity of urban areas. This observation led to distinguishing five models of fortified landscape taking into account such features as defence type, age and extent, geographic region, proximity of urban areas.

Fortified landscape type W1 “Fortress in the heart of the historic city”

This landscape type is exemplified by *Citadelle Petersberg* (Erfurt, Germany). Other similar cases are Fort *Grodzisko* (Gdańsk, Poland), *Twierdza Kłodzko* (Fortress Kłodzko, Poland), *Ingolstadt* or citadels like *Jülich* and *Spandau* (Germany).

Fortified landscape type W2 “Outskirts of the historic city”

This landscape type is exemplified by parts of the ring fortresses in *Kraków* (Poland) and *Pula* (Croatia). Similar

examples can be found in *Linz* (Austria), *Poznań* (Poznań), *Przemyśl* (Poland), *Verona* (Italy) and *Portsmouth* (United Kingdom).

Fortified landscape type W3 “Open mountain landscape and mountain defences”

This landscape type is exemplified by *Forte Belvedere-Gschwendt* (Italy) and the *Ecomuseo Grande Guerra Prealpi Vicentine* (Italy) (Figure 3). Other defences such as sections of the *Maginot Line* in the French Alps (France) and the *Vallo Alpino* in the Julian Alps (Slovenia) belong to this type of landscape.

Fortified landscape type W4 “Open landscape of the defences of lowlands”

This landscape type is exemplified by *Dobieszowice* strongpoint, which belongs to *Obszar Warowny Śląsk* (Fortified Region Silesia, Poland). Other examples of this type of landscape may be observed on *Nieuwe Hollandse Waterlinie* (New Dutch Waterline, the Netherlands), *Międzyrzecki Rejon Umocniony* (*Festungsfront Oder-Warthe Bogen*, Poland) or *Twierdza Osowiec* (Fortress Osowiec, Poland).

Fortified landscape type W5 “Sea coast defence open landscape”

The final landscape type is exemplified by the case study of *Orford Ness* (United Kingdom). To this model of landscape may be also classified defences of *Półwysep Helski* (Hel Peninsula, Poland) or the *Atlantic Wall* stretching along northern coast of several European countries (France, Belgium, the Netherlands, Germany, Denmark, Norway).

Discussion.

Today most of world’s population lives in cities. Therefore issues of forgotten places, landscapes, culture and identity within urban realm may be particularly pertinent. Moreover, cities with historic fabric have to constantly deal with the pressure of the contemporary development. This is particularly visible in cities in central Europe where a transition from the central planning (also in the field of urban decisions) to democracy and free market economy has occurred and results in constant tension between the general public interest like heritage protection and the desire to build without restriction on a private property. Here, discussion of the roles of NGOs within the



Figure 3 Citadelle Petersberg representing landscape model W1 “Fortress in the heart of the historic city”: plan, view on the historic cathedral and roofs of the old town in Erfurt, entrance gate by night (all pictures by A. Staniewska 2003-4)

urban fortified landscape models W1 and W2 is also perhaps most relevant and will be presented in this paper. Nonetheless, some comments of general nature referring to NGOs activities in the process of rehabilitation of other fortified landscape models named above will be made and other landscape models will be referred to.

In the landscape type “Fortress in the heart of the historic city” [W1] a multitude of actors and functions are concentrated in a relatively small area. Historic citadels, such as Petersberg, are usually nested in the old towns alongside cathedrals, churches, old tenements, public buildings and museums, that is to say, part of a rich urban fabric. Although in many aspects historic fortification bear some resemblance to civil architecture, especially when it comes to detail, they are distinctly different. This dissimilarity is both a weakness and a strength: fortification structures may be difficult to understand yet fascinating and attractive since they are such a contrast to their surroundings.²⁸ A location on a hill overlooking the city with military features, such as fields of fire, can be translated nowadays into scenic values and view connections. Tourist use of citadels placed in the middle of historic towns brings a new landscape dimension to perception of the city. Yet establishing a so-called “visual cadastre” is a town planning challenge.²⁹ Here it means mainly trying to reach a broad agreement on planning regulations, which would restrict parameters of the new buildings such as their height, to preserve particularly important views to or from the citadel. Expert organisations are usually active in this field and engage landscape architects to provide expertise. Other challenges include: matching appropriate function, finding balance

between historic fabric and contemporary use, acquiring funding, and competing with a diversity of other attractions and organisations promoting them. An NGO has a vital role to play in providing a social function for the renovated citadel and presenting its history and its contemporary meaning. Important tasks include developing exhibition scenarios, guiding tourists and providing information materials. This role may be prominent but the scale of the whole operation and fabric renovation usually exceeds the resources of an ordinary association to carry out without partners.

Landscape type W2 “outskirts of the historic city” is very well illustrated by the example of Kraków. Kraków Fortress was established in 1849 on the site of previous defence premises and nowadays over a hundred and forty sites of permanent and field fortifications may be found around the city of Kraków. The fortified area is partly located outside the city’s administrative border, in neighbouring communes. From an urban planning perspective it is a considerable difficulty to implement a holistic approach and execute protective strategic policies concerning fortified landscapes in the areas of urban and suburban sprawl because of high development pressure. Here above all, a strong alliance of NGOs, and conservation offices and local administrations in the implementation of already existing planning ideas is needed.³⁰ It can be observed that the bigger city, the more complex the issues to solve and the greater the danger of landscape fragmentation. In contrast to the citadels in city centres, fortification on the outskirts are less likely to lie in the centre of public attention. Yet they are more likely to serve smaller communities like boroughs and districts.

ANNA STANIEWSKA, PHD ARCH



Figure 4 Fort No 49 ¼ Grębałów restored by Ognisko TKKF Przyjaciół Konika (all photographs by Albin Marciniak)

A suitable contemporary use would be for local cultural centres providing activities for all age groups - a perfect opportunity for NGO's activity.

In Kraków Fortress the local government reuses fort No 49 Krzesławice for such purposes with good results. As far as NGO activities are concerned, a small association focused on hippotherapy and sports promotion (Ognisko TKKF Przyjaciół Konika) rehabilitated and used armoured fort 49 ¼ Grębałów (built between 1897 - 1899). With small grants and professional advice the fort was renovated step-by-step from 1988. It now houses a small horse-riding centre with all its facilities and small conference room and a compact historic exhibition. This is an example of how an initially "neutral" association can specialise over the years with the help of a research oriented organisation, since the success of Grębałów is owed to the architects and founder members of the *Towarzystwo Przyjaciół Fortyfikacji* (TPF, Association of Fortification Friends). Work to the fabric mainly comprised maintenance of walls, roofs, residual pieces of equipment, installation repairs and adaptation of the premises for its use as an equestrian club. This is typical preventive conservation without significant contemporary interference with the historical fabric.

A contrasting strategy was used at Fort św. Benedykta (St. Benedict Fort, Figure 5), which should temper the temptation to over-exploit the historic fabric. In this case an organisation called Stowarzyszenie Instytut Sztuki (the Art Institute Association) with little knowledge about fortification heritage received a fort on lease and commissioned an architectural project comprising a huge



auditorium and concert hall placed on the rooftop of the tower fort. Despite the attempts of experienced architects the project failed since the objectives and its functional parameters (estimated number of the audience in the concert hall) were unrealistic from the beginning. The Association ignored the initial warnings of fortified heritage experts that the proposed project greatly exceeded the adaptability of the fort. The project did not receive planning and building permission and the fort remains empty and unmanaged. Of course this does not mean that the use connected with contemporary artistic activity is condemned to failure. On the contrary, the Dutch Stichting Fort van Asperen, which adapted a similar tower fort shows that it can be a success but only if the design respects the original fabric and treats it as an exhibit in itself instead of consuming it with a new architectural structure imposed on the top.

In 1912 Kraków was referred to by Ebenezer Howard as a natural garden city since its green system was clearly visible at that time.³¹ The city was the result of evolutionary organic development since the Middle Ages,



Figure 5 An aerial view on Fort No 31 św. Benedykta (photograph by Piotr Tomaszewski)

supplemented by fortification and communication factors of the industrial revolution. At that moment the city incorporated surrounding communities as new districts realizing its strategy called the Great Kraków, yet it still was an Austro-Hungarian fortress. Further urban development of Krakow was profoundly affected by the building restrictions in the fortress belt such as the introduction of great amounts of masking and obstacle vegetation (at least twenty-five thousand tree seedlings), the reservation of plots of land for military camps, barracks and supply systems. All this created at the threshold of the twentieth century a harmonious and picturesque landscape with clear military features. Today, long after the disarming of the Fortress and after decades of various urban planning strategies, green city planning is based on a system of parks along the river Vistula and its tributaries, that are complemented by the preserved open green spaces of the former Kraków Fortress. This fortified green legacy consists of about three hundred hectares of green space surrounding old forts and other permanent works and about the same amount of decorative green space around buildings, such as the army barracks. More

than a thousand hectares are still open grounds with shrubbery and mid-field tree groups –so-called “side masks”.³² These are most important for the development and further maintenance of potential greenways for an estimated length of nearly fifty kilometres based on the former outer ring of the fortress. The structure of the green ring has been well preserved, in contrast to the historic radial roads and green spaces which have mostly been downgraded. Green wedges accompanying both active and disused railroads provide a chance to re-connect this system. Individual forts may be treated as potential parks since each of them is now usually covered with between four and eight hectares of old trees. Already fourteen forts and four historic barrack ensembles and a former airfield have been restored as public green space.³³ This reflects co-operation between the Institute of Landscape Architecture at Cracow University of Technology and the Board of Municipal Buildings, as well as private owners and NGOs.

Landscape type W3 “Open mountain landscape and mountain defences” is also often a suitable location for rehabilitation carried out by NGOs. A case study focused

ANNA STANIEWSKA, PHD ARCH

on Forte Belvedere-Gschwendt (located in Trentino, Italy), which is a part of the defences on the former border between Austro-Hungary and the Italian Kingdom and was built between 1908 and 1912 on a limestone headland overhanging the Astico river valley. The fort was partially dismantled in 1940, and after years of neglect in 1996 it was purchased by the Municipality of Lavarone. In 1999 the Belvedere-Gschwendt Foundation was established in cooperation with the Tiroler Kaiserjäger-Bund Innsbruck (Austria). The foundation maintains the fort and applies for external funding to run a constantly developed interactive exhibition named The Fort of Emotions. Conservation and restoration works included reinforcement of the structure of the blockhouses, along with the restoration of the original ceiling in zinc, rearrangement of the floors and reconstruction of a footway bridge over the front ditch. To improve access to the building an elevator and metal stairs were built. The surrounding area had to be partially deforested in order to

restore the original views. The connection to other forts is shown by the element of the exhibition called “The Eyes of Light” which evokes the optical telegraph connection to the neighbouring forts: Lusern, Cherle (San Sebastian) and the Monte Rust observatory. A special table may be turned by visitors towards different openings of the optical telegraph and this enables projection of images and information about optically connected forts. In recent years the centenary of the Great War was celebrated by establishment of many networks and open-air museums on the former alpine Italian front. Forte Belvedere has become a part of the Trentino Grande Guerra network³⁵ promoting former Austro-Hungarian fortresses and a project called Ecomuseo di Grande Guerra³⁶ covers area of defences in the provinces of Veneto, Belluno, Treviso, Venice and Vicenza. These go hand-in-hand with the marking of special mountain hiking trails and local tourism marketing and are a result of an alliance of small local NGOs and local government. The specific features

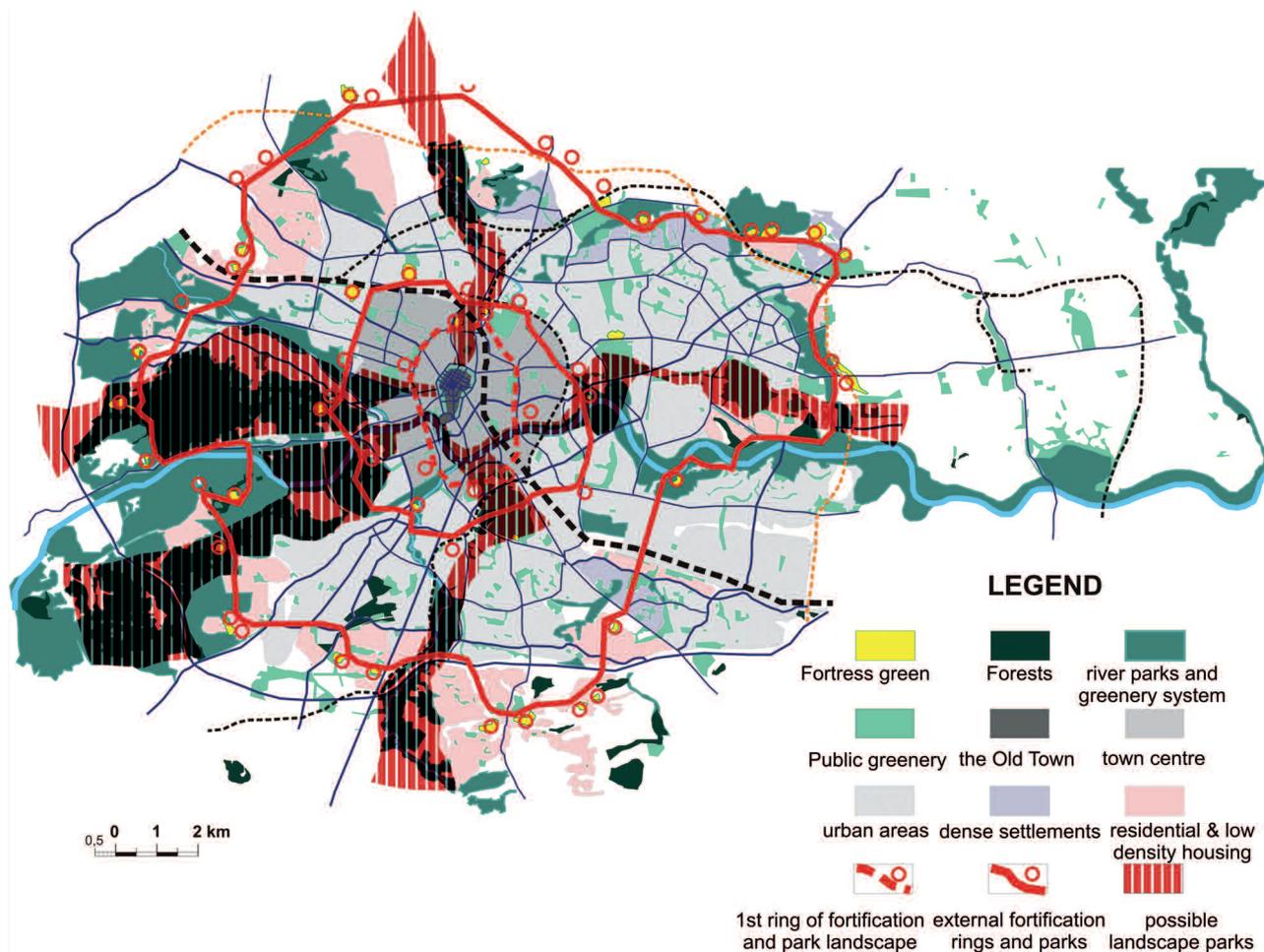


Figure 6 Comparison of the concept of Kraków as a green city with the system of greenery basing partly on fortress landscapes (red colour) and current urban planning situation, (drawing by A. Staniewska, 2005³⁴)



Figure 7 Example of mountain defence landscape [W3]: case Forte Belvedere Gschwendt in Trentino, Italy (all photographs by A. Staniewska, 2007)

of mountain fortification (elevation, excellent visual connections, technical solutions and special structures like tunnels, caverns, fortress roads and other infrastructure) and their organic link to the hard mountainous landscape are used to improve the attractiveness of tourism in these regions by means of restored forts and permanent ruins which are secured and opened to the public, often housing small local museums.

The Dobieszowice strongpoint restoration (located in Fortified Region Silesia in Poland) was carried out by the association Pro Fortalicium and is an example of activity of an NGO in landscape type W4 “Open landscape of the defences of lowlands”. Here in contrast to the mountain landscape (W3) scenic values are not so obvious. On the other hand there can be advantages with regard to accessibility - access routes are not so demanding and the sites can attract different types of visitors. Although lowland defences may be also nested in attractive

surroundings such as lakes, marshes and woods. Examples include Feste Boyen in Mazury lake district in Poland, Fortress Osowiec next to Biebrzański National Park, a



Figure 8
Dobieszowice
No 52
strongpoint
restored by Pro
Fortalicium
association
(photograph
Tomasz
Borówka,
interior
photograph by
Pro Fortalicium)



wetland site of worldwide significance under the protection of the Ramsar Convention, or Nieuwe Hollandse waterlinie (New Dutch Water Line). The success of rehabilitation here seems more dependant on the type and dimension of fortification. The successful case study in this landscape type focused on a small site (a concrete pillbox) while large fortresses like Boyen or Osowiec (nineteenth century Prussian and Russian fortifications) still encounter many problems with ownership and management issues, although in both cases there are active NGOs, who enable tourist access to the sites. Pro Fortalicium is an association now taking care of a number of small sites, of Polish and German dispersed defences from WWII, creating a tourist trail connecting several small strongpoints. Dobieszowice was their first miniature museum opened to the public after restoration works were carried out by Pro Fortalicium.³⁷

Landscape type W5 “Sea coast defence open landscape” is characterised by the proximity of the sea and the importance of habitats connected with this neighbourhood and specific defences. It houses often relatively new defence structures, which can be compared by non specialists to odd sculptures in the landscape. The Atlantic Wall or Cold War fortifications are subject of interest to fortification enthusiasts and are slowly gaining the interest of the general public. The example for this landscape model is Orford Ness Nature Reserve managed by the National Trust.³⁸ The impressive structures are left as exhibits in a huge nature protection area, which has a set of attractive visiting scenarios respecting the rules of nature protection. The National Trust is a renowned and experienced NGO which here uses its great and well exercised solutions in managing, financing and maintaining historic sites for the care of relatively recent heritage taken over by the forces of nature. This know-how, combining knowledge in heritage conservation and high management skills is key to success.

In all these models NGOs can play a vital role in carrying out scientific research and popularizing fortification heritage. Their deep knowledge of the subject can provide important information for the rehabilitation process, and lectures, meetings and guided tours may raise the interest of the general public. Do-it-yourself (DIY) experts have more chance to carry out renovation in smaller forts around the city (landscape type W2) than in large citadels, where they can only participate in the restoration works to a limited degree because of the scale

of the work involved. If successful enough, DIY experts, may even look after and open the entrusted fort to the public. Tourists’ clubs may advocate military heritage sightseeing as a branch of adventure tourism and run tourist information offices in fortification placed in city centres. For sites on the outskirts of historic cities (landscape type W2) they may lobby for active recreation using the net of old fortress roads and fortress green system (Figure 6) according to a greenway principle. In Kraków one of the most important ways of presenting fortified heritage is a cycling route established and marked thanks to the actions of the local branch of Towarzystwo Przyjaciół Fortyfikacji (TPF, Association of Fortification Friends).

Organising reconstruction events in both landscape types W1 and W2 is the domain of reconstruction groups. In landscape type W2 they may also lease and use single site like the Stowarzyszenia 3-go Historycznego Galicyjskiego Pułku Artylerii Fortecznej im. Księcia Kinsky’ego/ Association of the Duke Kinsky Third Historic Galician Fortress Artillery Regiment who started renovation of fort XV Borek of the Przemyśl Fortress with their own resources.

Other groups in both landscape models play similar roles. Explorers are likely to show the results of their fieldwork, while a shrinking number of veterans grouped in memorial organisations usually take part in meetings promoting historic education and living history events. Since fortification in urban areas is often a habitat for protected species, such as bats, ecological NGOs have a chance to conduct educational activities and promote protection of biodiversity within the cities and on their suburbs. Also, a good number of organisations not directly interested in the history of fortification (here called ‘neutral’) may decide to get involved in defence revitalisation in order to get accommodation for their cultural or educational activity. In these cases understanding of the specifics of the military heritage with care and respect for its landscape dimension is critical. The example of the failure to adapt fort św. Benedykta is a significant warning.

Conclusions.

Fortified landscape heritage may significantly enrich the tourist attractiveness of many European regions and cities. In large historic cities, which formerly were fortified, rings of defences with the accompanying green fabric may

provide leisure areas joined by cycling routes or walking trails and supplement other elements of city greenery systems.³⁹ In many places, however, a comprehensive rehabilitation programme is an essential condition of sustainable contemporary public use of these landscapes. Non-governmental organizations may play a vital role in the success of those actions. Their role is crucial as far as popularisation is concerned since newer fortification is still often beyond social consciousness and perception and treated as unwanted heritage what results in vandalism and neglect. Non-governmental organizations' activity may also lead to building trust and raising interest among the general public which may significantly contribute to the effectiveness and durability of the renewal. Their stewardship and mediatory skills combined with deep conviction that appropriate contemporary use would bring economic benefits for the local community, are indispensable keys to success. Yet many NGOs still lack these soft skills, what makes them less powerful and their ventures ineffective. Although the role of NGOs is very important, they are not a substitute for heritage conservation authorities, who have legal powers to put heritage conservation policies into practice. Good practice examples prove that interdisciplinary co-operation and task distribution among NGOs, local government and conservation authorities holds promise for successful fortified landscape rehabilitation.

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