

Adaptive Re-Use of Historic Covered Markets: A Review of Selected Cases in European Capital Cities

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Abstract: Adaptive re-use is essential for the sustainability of heritage buildings. It ensures cultural and socio-economic benefits through morphing conservation to the regeneration of the urban environments. The rehabilitation of historic covered markets erected in cast/wrought iron in European capitals reinforces this philosophy. Through the critical assessment of case studies on the restoration and adaptive re-use of covered markets in Malta, Spain, and Bulgaria, this paper identifies themes relevant to their conservation. Based on the Nara Document of Authenticity, the artistic, historic, social, and scientific dimensions of each heritage building were identified. The paper contributes (i) an analysis of the adaptive re-use of historic covered markets in urban conservation areas and (ii) highlights the socio-economic success of such heritage markets through minimal private investment. All the case studies involve the adaptation of former covered markets for uses associated with culinary arts and products, and in each case, a degree of tampering was observed which could be said to affect the buildings' cultural significance in terms of authenticity. However, the new interventions were predominantly reversible and thus the overall preservation of national heritage was, in all cases, ensured and protected for posterity.

Keywords: adaptive re-use; historic covered market; Les Halles Centrales; Mercado de San Miguel; Central Market Sofia; Valletta Market

Citation: Bianco, L. Adaptive Re-Use of Historic Covered Markets: A Review of Selected Cases in European Capital Cities. *Heritage* **2023**, *6*, 1089–1102. <https://doi.org/10.3390/heritage6020060>

Academic Editor: Stela Sofia Kyvelou

Received: 15 December 2022

Revised: 18 January 2023

Accepted: 19 January 2023

Published: 25 January 2023



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1. Introduction

The Department of Environment and Heritage of Australia ([1] p. 3) defines adaptive re-use as “a process that changes a disused or ineffective item into a new item that can be used for a different purpose”. The literature indicates that this is a valid strategy for cultural heritage preservation [2].

Focusing on derelict and disused buildings in urban cores as sites for real estate re-development is an economically attractive, investment-driven approach which can, however, lead to premature demolition. In contrast, the adaptive re-use approach treats such structures as “urban ore”, a “mine” of raw constructions [3]. They are the raw materials for adaptive re-use. Shen and Langston [4] note that “breathing ‘new life’ into existing buildings carries with it environmental and social benefits and helps to retain our national heritage”. They cite a number of successful, adaptive re-use case studies on military facilities—e.g., [5,6], airfields—e.g., [7], government buildings—e.g., [8], and industrial buildings—e.g., [9,10]. Nowadays, it is widely acknowledged that adaptive re-use is central to improving the performance—financial, environmental, and social—of buildings [11,12]. Defined as “a significant change to an existing building function when the former function has become obsolete” [13], adaptive re-use is a viable alternative which “entails less energy and waste and can offer social benefits by revitalizing familiar landmarks and giving them a new lease of life” [14].

1.1. The Nara Document on Authenticity

Central to the adaptive re-use of historic structures is the notion of authenticity; this is the focus of the Nara Document on Authenticity [15]. This document widened the concept of heritage contemplated by the Venice Charter [16], the first resolution adopted by the Second International Congress of Architects and Specialists of Historic Buildings, held in 1964 [17]. Article 13 of the Nara Document on Authenticity states: “Depending on the nature of the cultural heritage, its cultural context, and its evolution through time, authenticity judgements may be linked to the worth of a great variety of sources of information. Aspects of the sources may include form and design, materials and substance, use and function, traditions and techniques, location and setting, and spirit and feeling, and other internal and external factors. The use of these sources permits elaboration of the specific artistic, historic, social, and scientific dimensions of the cultural heritage being examined”.

The Nara Document argues that the spirit of a historic building can be inferred from multidisciplinary values inherent in the edifice itself; it is implicitly linked to authenticity and is a function of the diverse values which generates the sense of this authenticity. As Jaenen ([18] p. 1) puts it, “The research for the authenticity is based on research of the valuation”. The Raymond Lemaire International Centre for Conservation at the Katholieke Universiteit Leuven developed a matrix known as the Nara Grid, an evaluation scheme that facilitates the identification of the complex, layered value system which can be used as “a tool to indicate the multidisciplinary values” ([18] p. 1) (Table 1). It identifies “aspects of the sources” and the “dimensions of heritage” arising from Article 13. After filling in the matrix, the Nara Grid can be used to define the numerous values of a given building. “Proceeding from this definition, the essential spirit [of a given building] can be specified and be used as a guide to future treatment and monitoring for safeguarding the spirit” ([18] p. 1). The literature offers many illustrations of the grid’s usefulness when it comes to assessing these values to establish the authenticity of built heritage—e.g., [18,19].

Table 1. The Nara Grid based on the Nara Document on Authenticity [19].

Aspects of the Sources	Dimensions of Heritage			
	Artistic	Historic	Social	Scientific
Form and design				
Materials and substance				
Use and function				
Tradition, techniques, and workmanship				
Location and setting				
Spirit and feeling				

1.2. Aim and Outline of the Study

The trend towards adaptive re-use of historic buildings gathered momentum in the first decade of the millennium, as shown in several sources cited by Bullen and Love [11], namely [9,20–25]. This tendency has continued since then (see, e.g., [26,27]). The re-use of historic covered markets in European capital cities is no exception. Indeed, if, as Guàrdia and Oyón [28] argue, covered markets were once the makers of nineteenth- and twentieth-century cities, their adaptive re-use has the potential to regenerate the very heart of urban centers today.

The aim of this paper is to address adaptive re-use of covered historical markets which were spared the proverbial axe in southern European capitals. It comprehensively reviews the history of the selected covered markets and how they survived, in order to establish the heritage values of each of these heritage buildings and critically analyze the conservation interventions undertaken for their adaptive re-use.

2. Research Methodology

A qualitative method was used to identify three historic covered markets that met the following stipulations:

1. Location: Erected in the historic center of a capital city of an EU Member State;
2. Age: At least a century old;
3. Materials: Constructed mainly in cast or wrought iron; and
4. Current state: Restored and rehabilitated since the turn of the millennium.

The three selected case studies were Is-Suq tal-Belt in Valletta, Malta; the Mercado de San Miguel in Madrid, Spain; and the Central Sofia Market Hall (or Halite) in Bulgaria (Figure 1) (Table 2). Is-Suq tal-Belt, hereafter referred to as Is-Suq, was modelled on Les Halles Centrales, Paris’s central market, erected over the period 1854–1874 to the design of Victor Baltard (1805–1874). Les Halles Centrales had a metropolitan objective [29]; its architecture—influenced by the recommendations of Georges-Eugène Haussmann (1809–1891) [30]—provided the signature Parisian style for historical covered markets in European capitals in the late nineteenth and early twentieth centuries, becoming a prototype for iron and glass covered markets in Europe at the time. It influenced the design of Mercado de San Miguel and traces of its design are also present in Halite. The renovation and adaptive re-use of the Madrid market inspired the restoration and rehabilitation of a number of market halls in cities [31], including Is-Suq [32]. Each of these three markets adopted a different approach to conservation. Whilst Is-Suq was erected in the late nineteenth century, Mercado de San Miguel and Halite were erected in the early twentieth century. All three heritage buildings are essentially iron and glass structures; their roofs are supported by iron columns and trusses. They were all restored and rehabilitated through minimal private investment.



Figure 1. Some European Capitals: the locations of the selected case studies are in red font (basemap: © wiki-vr @ https://commons.wikimedia.org/wiki/File:Europe_blank_map.png (accessed on 21 November 2022)).

Table 2. Selected case studies.

	Malta	Spain	Bulgaria
Capital City	Valletta	Madrid	Sofia
Date of city’s foundation	1571	1561	1879
Case study	Is-Suq tal-Belt	Mercado de San Miguel	Central Market Hall
Time of construction	1859–1861	1913–1916	1907–1911
Date of conservation works	2016–2017	2003–2009	2000–2001
Cost of conservation works	EUR 14,000,000	EUR 20,000,000	EUR 8,400,000
Investor	Arkadia Group	Gastródomo de San Miguel	Ashtrom

3. Case Studies

3.1. *Is-Suq tal-Belt, Valletta*

The restoration of Is-Suq tal-Belt, which literally translates as “the market of the city”, has been the subject of a recent publication [33]. This market was built between 1859 and 1861 to the design of Hector Zimelli (1816–?) and the structural calculations of William Scamp (1801–1872) (Figure 2a). Once erected, it was highly regarded on the Continent and as far away as India [34]. Is-Suq was erected on the site of a former Baroque-era market dating to the early eighteenth century, when the island was ruled by the Knights of the Hospitaller Order of St John. Despite being advised to the contrary, Zimelli copied the architectural form and structure of one of the units at Les Halles Centrales [35]. Baltard, who was familiar with the climate of Malta, discouraged the use of a cast-iron structure “when the local stone is ideal for keeping out the heat” ([36] p. 275). Local construction-grade limestone was “cheap, manageable, adaptable, envied, and admired by surrounding countries, and constantly being transported from [Malta] at great cost to other parts of the world” ([37] p. 2). The market was eventually erected as a predominantly cast-iron structure with elevations constructed in local stone. The iron work recalls Les Halles, with girders that are similar but less ornate [38]. While local limestone was used to attain the desired thermal insulation, this energy parameter was also addressed in the design of the roof which adopted a unique topping for the decking [39]; timber planks were covered by a layer of well-compacted stone chippings with an overlying impervious layer of smaller chippings of worked earthenware with lime, a technique derived from local vernacular roof construction.



Figure 2. Is-Suq tal-Belt at present: (a) exterior and (b) interior (© Alessandra Bianco).

As a result of the damage suffered from aerial bombing during the Second World War, the elevation overlooking Merchants’ Street was recessed to its present position. The surviving roof structure was the controlling parameter in deciding where the current masonry elevation would be erected, shortening the original length of the market. Its layout was changed in the 1980s by the introduction of load-bearing masonry constructions to serve as shops around a central atrium, an intervention which not only altered the original layout but also hampered the overwhelming feel of the light structure roofing with a large space [40]. By 2007, the market’s use had significantly declined, but a year later it was listed as a national monument [41]. Following a new round of restoration works undertaken in 2016–2017, the market re-opened as a holistic culinary experience in early 2018, the year Valletta was the European Capital of Culture. The main ground level was converted into a food court preparing culinary specialties, the basement became a food

market, and the first floor was retained as an open space for cultural and other social activities. During these works, the original structure was restored and retained and discoveries relating to the construction of the former Baroque market were integrated into the final design (Figure 2b). All the interventions undertaken in the 1980s were removed, thus exposing the original iron structure.

3.2. Mercado de San Miguel, Madrid

Built between 1913 and 1916, the Mercado de San Miguel, which translates as “Market of San Miguel”, is located in the center of Madrid. Market stalls were first set up in the early nineteenth century on the site of the demolished Church of San Miguel de los Octoes. The number of stalls had grown significantly by the middle of the century, forming a sizeable open-air market. It developed in an unregulated manner, posing a significant hazard to hygiene by the second half of the century [42]. A further issue flagged at the time was increased traffic generated by such markets.

The Mercado de San Miguel is the only remaining cast-iron market surviving in Madrid [31,42]. It was built to the hygienic and functionalist specifications included in the design of architect Alfonso Dubé y Díez (1877–1937) [43], a design typical of covered markets erected in Madrid in the last decades of the nineteenth century, “another example of the formal renovation of industrial cast-iron ornaments” ([44] p. 256). It has two floors—the ground floor for trading and the basement as a store—and was erected in two phases. The first, completed in 1914, involved the construction of the basic structure and the roof, including its ceramic cladding, and installation of the drainage system. The second phase included glazing and setting up internal partitions for the stalls. The resulting cast-iron and glass pavilion was “a monument to modernism and new ideas on hygiene, reminiscent of Les Halles in Paris” [45]. Although it was successful, its importance diminished, and it was eventually rendered obsolete due to changes in local demographics and the advent of supermarkets. Various interventions—mostly uncontrolled—were undertaken which were not sympathetic to the original design. In 1960, it was transformed with modern furnishings and fixtures. Adaptive interventions to mitigate the cold in winter were undertaken in 1968. Partial consolidation of the semi-basement and other modifications were undertaken in 1984. The site then fell into disuse and was abandoned; however, the building was retained thanks to its historical and cultural value. In 2000, it was designated as a monument of cultural interest.

A consolidation and restoration project was launched in 1997 with a target completion date in 2002. Private investors acquired the building in 2003 and restored it to its former glory (Figure 3a). Interventions were introduced to meet contemporary standards related to hygiene standards, accessibility, fire protection, and electrical and mechanical services [42]. In 2009, it reopened as a gourmet market selling freshly prepared tapas and other food, as well as beverages such as beer, wine, and champagne, making it a culinary magnet for lovers of premium food products and offering an appealing destination to tourists [46] (Figure 3b). The ambience suggests a southern European version of Borough Market in London [47]; it is described in *The New York Times* as “a traditional market for the 21st century” [45]. It offers inspiration for the management of valuable cultural heritage through the re-adaptive design of contemporary market halls in a number of European cities [31].

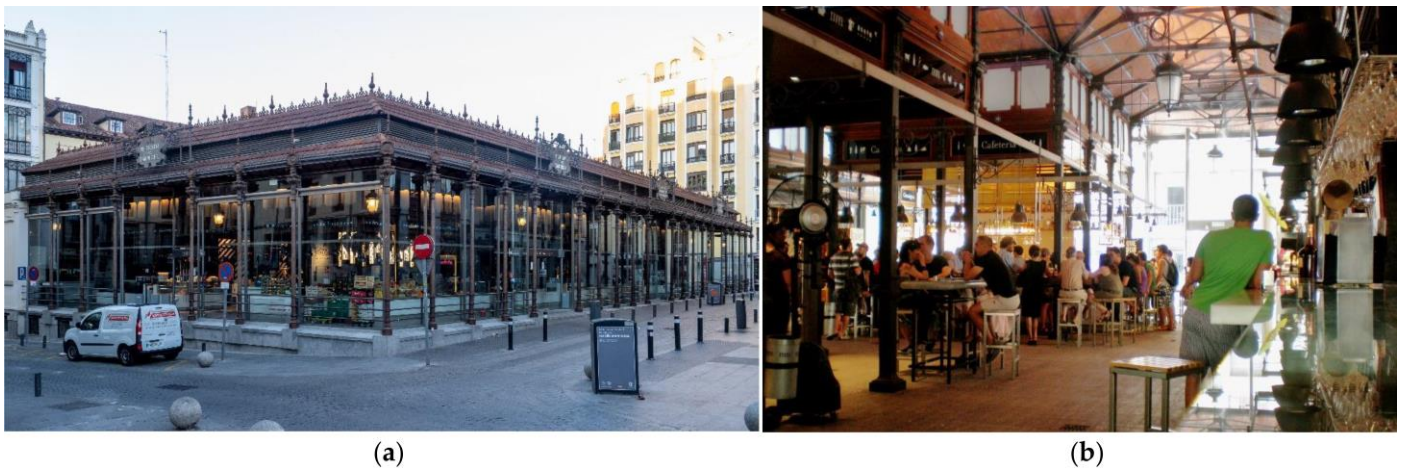


Figure 3. Mercado de San Miguel at present: (a) exterior (© Ajay Suresh/CC BY-SA 2.0) and (b) interior (© Beaudroit/CC BY-SA 4.0).

Mercado de San Miguel's conservation exploited the financial, social, and environmental performance of this historic building. Its location at the center of a touristic zone of Madrid brought new opportunities for its utilization. As the building's original purpose was no longer viable, it was adapted to the purposes of a contemporary gourmet market, which involved introducing modern-day technology into the historic fabric. The market's contemporary operation was the subject of a study on marketing strategies aimed at the revival of traditional food markets [48].

3.3. Central Market Hall, Sofia

The Central Sofia Market Hall (Tsentralni Sofijski Hali), also known as Halite (meaning 'market hall') [49] was the opus magnum of architect Naum Torbov (1880–1952) who, from 1906 until setting up his private practice in 1908, was Head of the Department of Architecture of Sofia Municipality [50]. Completed in 1911, it replaced a nineteenth-century timber construction for theatre performances.

Halite was erected in the neo-Renaissance style with references to elements of neo-Byzantine and neo-Baroque architecture [51]. These styles were popular at the time and can be seen in many landmark institutional and public buildings located close to Halite, such as the baths, the premises of the Faculty of Theology, and Sveta Nedelya Church (which was destroyed in a communist terrorist attack in 1925). Unlike Valletta and Madrid, which were both founded in the sixteenth century, Sofia is a relatively new city. It was not until 1879, after Bulgaria was liberated from 500 years of Ottoman rule by Russian forces following the 1877–1878 Russo–Turkish War, that Sofia was founded as the capital of the Principality of Bulgaria (becoming the Kingdom of Bulgaria in 1908). Reflecting this history, the architecture style was a nascent expression of artistic and cultural revival of the spirit of the Bulgarian nation, considered to represent a national style [52].

Halite's structure is typical of late nineteenth-century building technology: a riveted iron frame anchored in the elevations which provides peripheral load-bearing support. The elevations are constructed in masonry, consisting of brick at the core and a thick in-built façade predominantly made of stone with decorative ceramic tile strips, a late decorative interpretation of Byzantine style. The main elevation includes a small clocktower which reinforces its symmetry and generates visual axiality. Unlike Is-Suq and Mercado San Miguel, the architectural design complimented the urban context in which it was erected [53]. In the 1950s, its interior was changed considerably from the original state. The market eventually closed in 1988 due to structural and hygiene-related issues. It was meticulously restored and significantly upgraded in the last years of the twentieth century, reopening in 2000 (Figure 4a). Its three levels now host ready-to-eat food outlets, as

well as vendors selling clothing, accessories, and jewelry (Figure 4b). The first-floor walkway is effectively a balcony which overlooks the central court.



Figure 4. Central Market Hall at present: (a) exterior and (b) interior (© author).

The philosophical approach adopted for the building's restoration was to predominantly conserve and preserve the building in its entirety. The external envelope was restored, and the original design was retained. The internal layout was, however, reorganized; old stalls and partition walls were removed to make way for an open floor plan with stalls and/or small shops located along the central aisle and the perimeter of the building. In the opinion of architectural correspondent Owen Hatherley [54], the building was "slightly over-restored" with "one part Victorian iron and glass hall, one part Balkan bazaar". The basement level includes an exposition of in situ archaeological remains dating to the Roman times. However, due to a lack of attention paid to their restoration, they are of limited scientific value. The fixed retail outlets and the restaurant, together with its kitchen, are situated adjacent to these remains with little regard for the impact this might have on the remains.

4. Results

Van Balen [19] notes that "in the continental European context, the discussion on defining authenticity may differ significantly from the debate on authenticity in the south-east Pacific, in the United States, and probably also from the way the concept is being used in the United Kingdom". The Nara Grid was developed to overcome these differences in interpretation. It provides an essential tool for understanding the various dimensions used to represent the significance of historic buildings and is utilized in the interpretation and assessment of adaptive conservation elements. For this study, a grid was completed after collecting and processing the relevant data on each case study (Tables 3 and 4). The inputs for the Maltese case study are from Bianco and Busuttil [33].

Table 3. Nara Grid for historical covered markets in European capitals: artistic and historical dimensions of heritage.

Aspects of the Sources	Dimensions of Heritage					
	Artistic			Historical		
	Malta	Spain	Bulgaria	Malta	Spain	Bulgaria
Form and design	Designed in neo-Classical form with neo-Gothic structure.	Designed in 'Parisian style'; interior is neo-Gothic in inspiration.	Designed in the nascent national style; interior neo-Gothic structure.	Extensive industrial iron structure dating to the 19th-century British Colonial era.	Typical iron and glass structure inspired by Les Halles, Paris.	Early post-Liberation architecture in iron and glass.
Materials and substance	Original materials are in a good state of repair.	Original materials are in a good state of repair.	Original materials are in a good state of repair.	Use of imported 19th-century iron from UK.	Last remaining cast-iron structure market in Madrid.	Iron imported and used in a structure at the center of the new capital.
Use and function	Form and design follow the original function.	Updated and diversified original concept.	Interior is visually intense due to the ongoing retail activity.	Exemplar of iron-framed covered market in Europe.	Functional, yet integrates composition and ornamentation.	Building erected a few decades post-Ottoman occupation.
Tradition, techniques, and workmanship	Constructed in masonry and iron.	Constructed in glass and iron.	Constructed in masonry, iron, and glass.	State-of-the-art building science and construction.	State-of-the-art building science and construction; prefabricated ornamentation.	Foreign craftsmen and laborers were probably engaged.
Location and setting	X	X	Read in the context of novel buildings erected in the nascent national style.	Located on the site of a former Baroque-era market.	Located on the site of a former open air-market in the former location of a demolished church.	Located on an ancient Roman site; at the end of the 19th century, it housed a timber building utilized as a theatre.
Spirit and feeling	Ornamented iron columns and beams overwhelm the space.	Structure is not overwhelming but inspiring.	Perceived as innovative at the time of construction.	Feel of the original 19th-century structure can still be appreciated.	The feel of the original structure can still be appreciated.	The feel of the original structure can still be appreciated.

Table 4. Nara Grid for historical covered markets in European capitals: social and scientific dimensions of heritage.

Aspects of the Sources	Dimensions of Heritage					
	Social			Scientific		
	Malta	Spain	Bulgaria	Malta	Spain	Bulgaria
Form and design	Main food market in the capital. Can be used in all weathers as the interior is covered.	Covered food market which can be used in all weathers.	Main food market in the capital. Can be used in all weathers as the interior is covered.	Technological and engineering feat to span a large space.	Similar to other markets on the Continent.	Spanning a large space and delivering infrastructural quality that was substantial for the time.
Materials and substance	X	X	X	Illustrative of 19th-century use of iron in buildings.	Illustrative of early 20th-century iron frame technology.	Illustration of early 20th century iron frame technology.
Use and function	Reopened as a 'holistic culinary experience', i.e., a high-end food hall with a food	Reopened as a 'culinary destination', i.e., a gourmet market and food hall.	Reopened as a covered marketplace; intention to introduce a year-	X	X	Introduction of modern organization, sanitation, and control systems.

	market at the basement level.		round farmers' market.			
Tradition, techniques, and workmanship	Various tradesmen worked on the construction.	Various tradesmen worked on the construction.	Various tradesmen worked on the construction.	Innovative composite roofing construction in local tradition.	Composition of roof: ceramic crest crowning the roof.	Combination of then newly introduced industrial methods and craftsmanship.
Location and setting	Landmark building in central location, a focus for commerce and social interaction.	Landmark building in central location, a focus for commerce and social interaction.	Landmark building in central location, a focus for commerce and social interaction.	X	X	X
Spirit and feeling	High quality, sophisticated, gastronomy-focused public space, popular with tourists and more affluent residents.	High quality, sophisticated, gastronomy-focused public space, popular with tourists and more affluent residents.	Retains much of the function of the original market; community-oriented and focused on local producers and consumers.	X	X	Complements urban design and planning of the time.

The crucial parameters for assessing the conservation and adaptive re-use of the three markets are given in Table 5. Legibility relates to whether the authenticity of the original heritage building was overshadowed in its restoration; in a successful adaptive re-use, it should be possible to 'read' the new elements as distinct from the old. In the case study from Malta, the interventions in the internal layout and the apertures can be read easily. This is not the case for its roof, however, where the new timber planks were rendered such that they seem original [55]. To offer a distinct insight into the intervention, the adaptive re-use of Mercado de San Miguel involves two aspects: the authenticity of the original fabric and the introduction of contemporary materials. Halite has lower legibility, that is, it is more difficult to distinguish the new interventions, as they were amalgamated with original elements, making it almost impossible to distinguish the two.

Table 5. Critical assessment of restoration and adaptive re-use of case studies.

	Malta	Spain	Bulgaria
Legibility	Clarity between the old and the new is present.	Clarity between the old and the new is present.	Clarity between the old and the new is blurred.
Reversibility	Significantly reversible.	Significantly reversible.	Reversible.
Overshadowing	Significant overshadowing generated by the additions to the first floor and awnings.	Original values significantly retained.	Original values significantly retained.
Alterations	Significant.	Externally minimal.	Externally none.
Replacement of original elements	Roof rebuilt in different fabric although visually similar to original.	Externally insignificant.	Externally none.
Anastylosis and ruins	Ruins preserved and integrated in the new design.	No ruins present on site.	Anastylosis undertaken to ruins.

It is imperative in conservation practice that new interventions do not impair the original form and integrity of the property and its environs and that they are reversible. If this is achieved, the old structure and its context can be read. Most of the interventions at Is-Suq are reversible, including the retractable awnings. In order not to tamper with the structural stability of the original iron structure, a new visibly distinctive structure was introduced. In the Mercado de San Miguel, the structure's modernization resulted in the

partial loss of the heritage fabric. This was also the case with interventions at Is-Suq where the original timber beams were modified to ease the installation of extraction equipment [33]. The minor interventions carried out in the redesign of Halite's layout were fully independent of the original fabric, therefore reversibility can be achieved to some extent.

Both the Nara Document on Authenticity [15] and the Burra Charter (Article 3) [56] strongly advise adopting a cautious approach to changes to the original heritage building and not overshadowing the values of the edifice. Overshadowing is present in Is-Suq through the additions at the upper level overlooking Merchants' Street. In Mercado de San Miguel, the original cast-iron structure was retained but the glass paneling and internal layout were modified. Halite retained its original fabric and only internal alterations were undertaken. Its original use was retained, and no additions were introduced other than the redesign of the internal stalls.

External alterations, be they new additions or otherwise, should respect the integrity of the original built heritage. Respecting the aesthetic experience of the urban context is imperative; alterations must be compatible with the building's environs. Under the Venice Charter [17], restoration works involving replacement of lost parts should complement the whole. Any interventions should be distinguishable from the original, thus ensuring authentic reading of the artistic and/or historic evidence. In Is-Suq, most interventions do respect the authentic heritage values of the building, with the exception of the addition to the upper floor of large retractable canopies, introduced after the premises were reopened to cover the outdoor dining area in front of the market. Similar to the market in Malta, the internal layout in Mercado San Miguel was remodeled and the original structure was preserved. The restoration of Halite also kept to the original design; the original fabric was not replaced, no significant features were affected or removed, and no new additions or renovations were made to the exterior.

Article 15 of the Venice Charter [17] stipulates that ruins on site must be maintained and measures must be taken to conserve, protect, and reveal them without distorting their meaning. With the exception of anastylosis—reconstruction in which the damaged heritage building is restored using the original architectural elements as far as possible—reconstruction should, a priori, be ruled out. In the Valletta Market, ruins dating to the period of the Knights of Malta were protected and integrated into the new design. At Mercado de San Miguel, the only existing record states that the site was previously occupied by a church; however, no tangible features are present. Halite's site dates back to Roman antiquity. Ruins were found and, as mentioned above, although they have been revealed to the public, they are not protected from the micro-environment.

Mercado de San Miguel underwent restoration of its built structure and has been adaptively re-used as an exclusive culinary destination aimed at visitors to the city. Similarly, Is-Suq was rehabilitated as a food court and food market, as well as a space for cultural and other public events. The approach adopted in Halite was the complete restoration and conservation of the original building. Although its internal layout was remodeled, its emotional, functional, and cultural context were retained. All three case studies, but especially those in Malta and Spain, capitalize on the tourism generated by their location.

5. Discussion

“Adaptive re-use has become an integral strategy to ameliorate the financial, environmental, and social performance of buildings” ([11] p. 1). The opportunities generated by such re-use usually significantly outweigh those related to demolition and rebuilding [9,11,13,57–60]. The adaptive re-use of existing heritage buildings is more efficient and effective than demolition and rebuilding, since the latter is a process with a high environmental impact, as it generates more waste, uses more materials, and involves higher energy consumption (for transport and on-site activities) and therefore causes more pollution [61,62]. There is a broad consensus that adaptation not only minimizes the disturbance involved but contributes significantly to the sustainability of existing buildings [11].

Wrought-iron and cast-iron market halls represent a form of industrial architecture with “clear spaces ... sheltered from the elements and ideal for looking at goods in an orderly way” ([63] p. 456). Since they reopened following restoration and adaptation, all three historic covered markets in this study registered successful operations. All three were projects initiated by the respective governments but entrusted to private investors. In each case, the level of investment was a fraction of that required for their demolition and removal, followed by the construction of a new building on the site. Furthermore, the projects were completed in much shorter timeframes than would have been required for demolition and rebuilding. In short, it was cheaper and faster to adapt and re-use these historic covered markets than to demolish and rebuild them, a finding which conforms with previous research by Douglas [13], and Kohler and Yang [64].

According to a proposed typology of food market visitors [65], “food-market lovers” are a sub-category of food travelers, defined as “tourists who enthusiastically spend a proportion of their holiday time visiting these urban establishments and seeking urban food market experiences” ([66] p. 33). In the case studies from Spain and Malta, this group was targeted in the adaptation of these spaces as high-end food halls, catering to a relatively affluent clientele, including tourists, while potentially excluding less affluent local community members. This highlights an important risk that should be considered when undertaking the adaptive re-use of such markets, namely, gentrification [67,68]. Gonzalez and Waley [68] note that the “narrative of decline and revival” has driven traditional retail markets to “the edge of a gentrification frontier”. Initiatives involving adaptive re-use can increase the economic value of a neighborhood by attracting affluent customers, but can also exclude low-income earners, as is the case in Valletta [33]. As noted by Rose [67], one way to combat gentrification is through equitable development. While gentrification is an important topic, and a risk factor that should be considered when undertaking such projects, it is not a focus of the present study.

6. Conclusions

Inspired by the Parisian style promulgated by Les Halles Centrales, many European capitals host historic neo-Gothic covered markets constructed from iron. As the original purpose of these sites has faded in relevance, many have been transformed into twenty-first century cathedrals of culinaria. In the case studies presented here, the original concept, appearance, and activity of the traditional covered markets have been preserved, while their gastronomic spectrum has been updated and diversified. Their restoration offers a lesson in morality in architecture, a theme first taken up by Watkin [69]. The user/viewer can univocally read the original structure in Pugin’s notion of truth in architecture [70,71].

With minimal private investment, the adaptive re-use of such markets offers a successful route to reviving the significance of historic buildings, while their operation generates the funds needed to sustain and maintain their structures. The notion of authenticity should be at the core of any such project; however, in these case studies, this concept was often placed second to the rehabilitation of the historic covered markets. Nevertheless, although the cultural significance of these buildings was, to varying degrees, altered, their adaptive re-use was successful. The new interventions were mostly reversible and thus the national heritage was retained.

As a result of their adaptive re-use, the material culture represented by these covered markets endured, and the urban conservation areas in which they are located were revived. Their new uses resuscitated the original purpose of these spaces—food. In this sense, the historic covered markets were renewed both physically and metaphysically. The low investment for these projects, coupled with the revenue they generate, not only minimizes the payback period but ensures that they run at a net profit. Their adaptive re-use morphs conservation onto urban regeneration and sustainability.

While all three projects demonstrate high environmental sustainability thanks to the re-purposing of original structures, social sustainability issues were, perhaps, less of a

focus in Malta and Spain. While the building in Sofia continues to serve the local community as a traditional market, the adaptation of the other two markets as high-end food halls risks contributing to gentrification. In this regard, alongside environmental sustainability, it is also important to consider social sustainability. To achieve this, it is imperative that any project embeds both cultural and social benefits for the existing neighborhood. Any reinvention that fails to take these factors into account risks driving out less affluent communities, leaving local people out in the cold.

Funding: This research received no external funding.

Data Availability Statement: Not applicable.

Acknowledgments: The author would like to express gratitude to Yassen Kyossev, Head of the Urban Planning Department, Faculty of Architecture, University of Architecture, Civil Engineering and Geodesy, Sofia, for his critical reading of the Bulgarian case study, and Carlos Marmolejo Duarte, Carmen Rodriguez Pedret, and Antoni Ramon Graells from the Polytechnic University of Catalunya, Barcelona, for their help in securing information on the Spanish case. Thanks are due to Alessandra Bianco for granting me permission to reproduce Figure 2. Many of the ideas on the theme of this research matured whilst directing David Busuttill's M.Arch. dissertation on the Valletta Market.

Conflicts of Interest: The author declares no conflict of interest.

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