

INTRODUCTION

Brussels' urban space, like that of many other cities, is dotted with remnants of a productive industrial past. Small-scale industrial buildings such as workshops and warehouses can still be found along streets in many neighbourhoods; but more commonly, they are hidden behind stately facades, embedded within the city block and only accessible via a wide entrance gate.1 The activities that took place there were generally not aimed at mass production for export, but were smallscale manufacturing enterprises intended to meet the daily needs of the people living in the neighbourhood. Within the small-scale manufacturing category, we include construction-related businesses, such as contractors, joiners and building materials suppliers who fulfilled the demand for housing, offices and other premises in an ever-expanding city. Their business premises were the bases from which they operated and formed indispensable links in the creation and transformation of the urban fabric. These buildings were often designed in a purely functional way, but sometimes they also acted as an advertisement for their craftsmanship. The ubiquity of this industrial heritage bears witness to the fundamental role these companies played in the local economy as well as in the evolution of the city.2

This article aims to highlight the multifaceted contributions of the small-scale sites of constructionrelated businesses, both as industrial heritage and as ongoing productive spaces. Such a focus is becoming more and more urgent today given the great pressure that these and other small-scale productive enterprises face in a city like Brussels. The dynamics of constantly rising real estate prices are making the redevelopment of such premises into housing a very lucrative investment. As a result of this residential gentrification boom, many workshops have been transformed into dwellings, while large-scale warehouses have succumbed to redevelopment. Based on an inventory of industrial heritage in Brussels drawn up in the 1980s, our research shows that since then, one in three construction industry-related buildings has already disappeared.3 As a result, the urban environment is rapidly losing its distinctive industrial heritage and mixed-use urban fabric.

Due to economies of scale, real estate dynamics and changing market conditions, the fine-grained fabric in which various urban functions thrive is also disappearing. The knowledge and skills required to meet the basic needs of the city in a sustainable way, which have traditionally been available through local tradesmen, are thus being lost. The ever-increasing urban

traffic congestion and urban unemployment have convinced academics and urban planners of the need for productive enterprises such as construction companies to be more permanently embedded in the local urban fabric.4 In contrast to monofunctional industrial areas on the urban fringe, the inner-urban fabric offers opportunities to organize shorter chains in the immediate vicinity of workers, material flows and markets. At the end of the 1960s, Jane Jacobs was already arguing for the integration and preservation of small-scale businesses in the urban fabric.5 She maintained that the tradition and local embeddedness of historical craftsmanship are necessary for resilient and self-sufficient cities. Today, policymakers are making the same case: that small-scale manufacturing and construction-related trades should no longer be seen as a background activity that facilitates living, consuming and working in the city, but as an integrated industry that not only provides necessary services but also employment for local residents.6 The construction industry, more than any other industrial activity, has a direct relationship with the city since the changing locations of construction sites require the close proximity of a firm's business infrastructure. Because they are so close to the demand side, the need for motorized transport of people and goods is reduced or can be partly replaced by more sustainable alternatives that are abundantly present in the city.

The regional development agency of the Brussels-Capital Region, which is responsible for providing appropriate and affordable workspaces to enhance the local economy, states that these findings are also supported by an increasing demand for small-scale workshops in the city. Thus, the heritage of small-scale industry continues to be indispensable to the functioning of the urban economy. Preserving these places offers the possibility of (re)organizing city-sustaining activities within a dense urban fabric.

Inspired by an integrated vision of heritage, we advocate a broader interpretation of the value of industrial heritage. We question an exclusively material approach by pointing to the intangible heritage value of continued productive use. Can industrial heritage be a meaningful point of reference for a sustainable reintegration of productive activities into the city? Can we avoid a breach with the past by recognizing a heritage value in active production? How can we anchor a productive use in time and space without freezing productivity or the architecture of its workplace?

After a brief theoretical reflection on the value of small-scale industrial heritage in the city, we will discuss the historical development of the industrial heritage of Brussels' construction companies between 1890 and 1970, the period in which the suburbs of Brussels were taking shape. The *Inventaire visuel de*

l'architecture industrielle, drawn up in the 1980s, is the starting point for a macro sketch and geographical analysis at the scale of the Brussels-Capital Region. Through a series of exemplary cases, we illustrate different trajectories of continuity and discontinuity of heritage on the one hand, and of the productive use of the sites of construction companies on the other. In doing so, we try to understand what motivates companies to either leave the city, cease to operate, or adapt to changing market conditions. We formulate proposals for the preservation of these historically valuable and currently indispensable activities in the city and evaluate how the remaining industrial heritage can continue to serve as a source for the preservation and reintegration of small-scale manufacturing into the urban fabric.

THE VALUE OF INDUSTRIAL HERITAGE IN THE CITY

The historical importance of small-scale production in the city and the resulting ubiquity of the industrial heritage of these companies, contrasts sharply with the attention this heritage has received so far. As yet, there is no scientifically sound framework for evaluating historical significance.7 Numerous small workshops and business premises remain under the radar, especially those of companies that are still active. Nor does the existing discourse provide sufficient support for businesses to continue operating at their current location. The Dublin Principles for the preservation of industrial heritage state that 'in the case of active industrial structures or sites of heritage significance, it must be recognized that their continued use and function might carry some of their heritage significance and provide adequate conditions for their physical and economic sustainability as a living production or extraction facilities'.8 However, few have followed this recommendation, with occasional cautious exceptions such as Helen Lardner: 'In some cases it may be more important to continue the historic use of the place even if it results in changes to existing fabric to allow technology to be updated and the existing use to continue.'9 The heritage sector focuses primarily on the tangible value of buildings, and in particular on the preservation of large-scale symbolic buildings.10 All too often, people settle for a cultural or residential (and often gentrifying) re-use of disused docklands and 'urban cancers', as a lever for urban development.11 They take for granted that there is hardly any relationship between a building's new use and its historical functions.12 Because this undermines the coherence between the architecture, the original function(s) and the contemporary use of industrial heritage, the industrial heritage is paradoxically in danger of losing its role as bearer of cultural value.

We therefore advocate a broader interpretation of

heritage values in order to anchor productive uses to historical industrial sites via the same or similar activities. In addition to tangible values that can be attributed to industrial heritage because the building, as a rare, recognizable or representative relic, bears witness to an important social, economic, technical or architectural past, there is also an intangible value in the continuity of the productive use of the site - regardless of the condition of the building itself. Even if it concerns a small-scale productive activity, perhaps invisible from the public space, the historical value of the current function can be reason enough for protecting its continued existence on that site. After all, the presence of an economic activity in a given location is rarely meaningless, but always linked to economic and social factors such as the proximity of suppliers, transport channels, workers or a ready market. Within the city, small-scale producers often find all these advantages together, not least those in the construction sector.¹³ In the past, suitable infrastructure has often been built on advantageous sites that, with the necessary adaptations to today's requirements, are still capable of accommodating urban economic activity. A renewed relationship with the past thus brings the productive heritage to the fore as a catalyst for the preservation and reintegration of productive activities in the city. Even when old and valuable industrial buildings are partially or completely replaced, the sustainable survival of activity on that site can be regarded as an instance of valuable intangible heritage.

Within the heritage discourse, a similar renewed relation with the urban past was recently suggested in the Davos Declaration issued by the European Ministers of Culture on the occasion of the European Year of Cultural Heritage in 2018.14 Tangible heritage value is no longer paramount, but is incorporated into a plea for a more multifaceted approach to heritage. The untranslated term Baukultur¹⁵ refers to the culture of building: it encompasses every human act in the entire process of creating urban space, from quality craftsmanship to large-scale urban planning projects. Contemporary interventions in this spatial context should strive for high-quality Baukultur based on an appropriate relationship with a site's past. This means that the existing heritage is seen as a point of reference for new, high-quality interventions to ensure the continuity and transmission of the cultural dimension of the urban fabric.

The building trade is an interesting case with which to test the Davos Declaration. Long-established building contractors can be regarded as the literal producers of Brussels' *Baukultur* and therefore fall entirely within the definition. It is impossible to detach them from the place that enabled them to fulfil this role. Moreover, due to the nature of the construction indus-

try and the associated expertise, the architecture of the construction companies' premises is an interesting reflection of Brussels' *Baukultur*. As a physical expression of their infrastructural needs and technical skills, their industrial heritage – more than that of other industries – contains valuable insights into the city's productive past.

Historical buildings can still meet the spatial requirements of a Brussels construction company today. The continued presence of urban (construction) activity in these workshops is also supported by the Davos Declaration, which emphasizes the need for locally embedded businesses. A high-quality *Baukultur* can provide an authentic and resilient urban environment in which a lively mix of functions and people thrives. Given the enduring need for construction companies in the city, maintaining the original use of their industrial heritage is a feasible objective. In order to avoid a breach in the use of the industrial heritage, it is necessary to ask under what circumstances we can recognize a heritage value in still existing productive activities.

THE HERITAGE OF BRUSSELS CONSTRUCTION COMPANIES AT MACRO SCALE

In the 1980s, researchers from the Brussels Archives d'Architecture Moderne drew up an inventory of industrial heritage in the Brussels-Capital Region. The streets of each municipality were systematically surveyed and studied using old aerial photographs in search of valuable industrial heritage built before 1940. Municipal building permits were collected and visits to sites were documented photographically. For each of the approximately 1,600 buildings identified, a form was completed that included the year of construction, the architect, the owner, and so on, as well as the succession of companies that occupied them. We used these records to identify a total of 178 industrial buildings that were erected for a constructionrelated business. The selection includes joineries, warehouses for building materials, glaziers' workshops, stonemasons' yards, located throughout the territory of the Brussels-Capital Region (fig. 1).

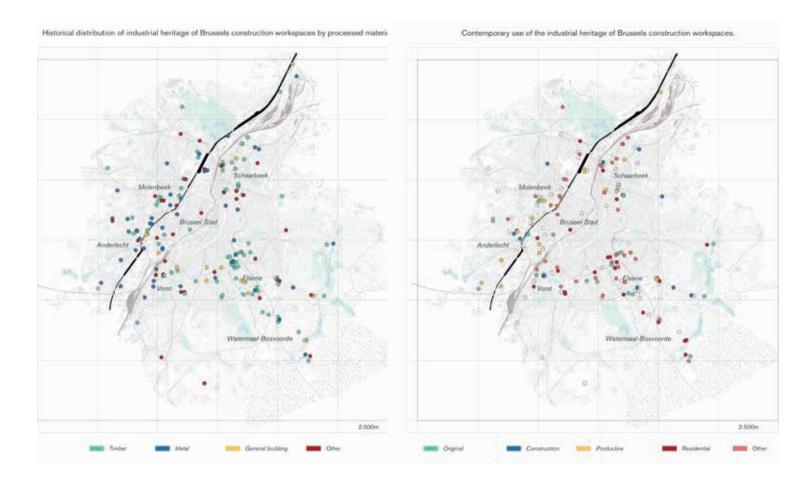
Using the addresses inventoried, we mapped the geographical distribution of the heritage. This geographical database was then updated and the original use of these buildings was verified by searching digitized commercial directories, databases of still active companies and historical maps. If possible, the premises were also visited, and sometimes the owner or user was interviewed. Characteristics such as the condition of the building (demolished, partially demolished, standing), the building type (workshop, warehouse, factory) and its original and contemporary use (carpentry, stonemasonry, etc.) were mapped in order

to show their numbers and distribution and to reveal patterns at a macro scale.

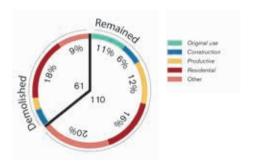
Based on this updated version, we can state that by 2019 35% of the construction-related heritage built between 1890 and 1940 that existed in the 1980s had already wholly or partially disappeared. It is noteworthy that former metalworking and stonemasonry workshops and warehouses, together with factories producing building materials, were the most likely to be lost. Market conditions in these areas in particular have changed considerably. Reduced demand for natural stones and metal building components is one reason for this decline, but the production of building materials has also left the city due to competition with larger companies. The substantial claim on space made by these workshops, factories and warehouses means that these sites are today prime candidates for redevelopment. Many are located in formerly mixeduse areas such as Anderlecht, Molenbeek-Saint-Jean and Watermael-Boitsfort - areas facing development pressure, where the heritage resources are often sacrificed to meet an ever-growing need for housing. There is no place for local economic activity in these residential redevelopment projects.

The workshops of timber builders and (general) contractors have been more resistant to this pressure, with only one in five buildings demolished.¹⁶ Nevertheless, our dataset shows that this building stock has not been entirely spared from residential gentrification. No less than 55% of all remaining business premises today house a non-productive activity. Developers of loft dwellings and 'co-working spaces' find the spaciousness and location of such workshops extremely suitable. Figure 1 shows that this 'loftification' trend occurred mainly in the mixed residential areas of Ixelles, Forest and Schaerbeek. Where the Brussels-Charleroi Canal adjoins the centre of Brussels, a cluster of buildings have been converted into 'co-workings' or acquired new cultural uses. These largely coincide with the inner-city locations previously occupied by timber builders and small-scale contractors. The owners of once strategically embedded business premises now face a choice between a lucrative sale of the real estate or a potentially loss-making takeover of the company.

However, the macro analysis also indicates that a significant proportion of the industrial heritage is still in productive use. Some 21% of all business premises are currently occupied by a company active in the construction sector. Other kinds of small-scale manufacturers occupy another 15% of the building stock. Half of today's construction companies continue to use their buildings for the original purposes. This is especially the case for suppliers of building materials and joiners. In spite of changing market conditions and







development pressure, these actors have managed to maintain their central, urban locations. The adaptation strategies, intentional and unintentional, that underlie this continuity are discussed below in the context of individual cases.

CONTINUITY AND DISCONTINUITY

To obtain insight into the continuity and discontinuity of productive activities in the city, a macroanalysis does not suffice. In order to explain the trends described above, four typical scenarios were formulated, which pertain to 78% of the buildings in the database. The first two concern the loss of locally established construction companies in the city either through the complete redevelopment of the site (23% of the buildings studied) or the redevelopment of the existing business infrastructure into housing (40%). At the other end of the spectrum, we examined the businesses that continue to pursue their original activities in the historical premises (10%) or in new workspaces on the same site (5%). The examples representing the four scenarios were drawn from different subsectors and neighbourhoods.

RESIDENTIAL GENTRIFICATION: REAL ESTATE DEVELOPMENT

In the 1880s, the Limburg timber merchant Jean-Mathieu Lochten built his warehouse near the Rogier goods station in Schaerbeek. Today, more than 125 years later, no tangible evidence of this activity remains.17 Developing in step with late nineteenth- and early twentieth-century urban expansion, Bois Lochten became one of the city's most important timber suppliers. This steady growth led to the establishment of a business infrastructure that ultimately covered several city blocks. Like other timber warehouses in Brussels, Bois Lochten's structures had open elevations and meticulously sealed roofs to ensure optimal storage conditions for the wood. The buildings were positioned and set up in such a way that horse-drawn wagons, and later motorized vans, could be loaded sideways. The favourable location and associated facilities allowed successive generations to keep the timber trade going and prosperous for more than a century. From this central location on rue Rogier, the company was able to respond quickly to the demand for timber in the city (fig. 2 and 3).

The site has recently been redeveloped. In 2010, the huge warehouse was demolished to make way for 55 residential units; then, at the end of 2018, the last wooden structure, together with its owners, also disappeared from the streetscape. Part of this site was owned by another party who was keen to dispose of the property, so the entire site was absorbed by the large-scale redevelopment project. The timber merchants





- Now defunct François Lochten timber merchant firm in Schaarbeek, Brussels-Capital Region, 2018 (authors' photographs)
- 3. Jacqueline and Jean-Marie Lochten in front of the timber yard on Van Hoordestraat in Schaarbeek, 1940s (Lochten & Germeau company archives)



started to look (so far in vain) for a new, well-located site for their thriving business. The original location (close to the former goods station) was so favourable that it is proving impossible to find an equally advantageous alternative in the now densely built-up urban fabric. To make matters worse, the entrepreneurs learned from a survey of their customers that they would not be willing to follow the company to a site outside the city. The disappearance of this company leaves Bois Watteau on rue Delaunoy in Molenbeek-Saint-Jean as the only historical timber business still active in the Brussels-Capital Region. This company's original industrial buildings, dating from 1906-1908, are still being used for the activities for which they were constructed, giving the site both a large tangible and intangible industrial heritage value (fig. 4).

In Etterbeek, the arrival of European Union institutions has brought with it a similar real estate dynamic. As in Schaerbeek, urban business premises are systematically making way for high-rise offices and housing. Just a stone's throw away from the European parliament is rue Gray, which follows the course of the vaulted Maelbeek river. Many small-scale industrial activities had established themselves along this axis in earlier times, and for construction companies too, the low-lying land was a cheap location near to the expanding districts housing the well-to-do middle classes. In future, however, the area is unlikely to include industry, given the ever-increasing development pressure. With the exception of a furniture maker and a few car workshops, this district has lost its industrial identity. The bricked-up gates and windows testify to the fact that there is no longer any place for this kind of productive activity in the European capital. The former rue Gray living quarters and workshop of marble worker Zaccarini shows that this threat is not confined to the largest plots of land. After Zaccarini's death in 2011, his relatively small workshop was absorbed into a large-scale project on the adjoining plot. As Zaccarini's strategic location was crucial to the development as a whole, the market value far exceeded the material value. The building, which had served as the Parisian craftsman's workshop for more than half a century, was demolished in 2018. With its disappearance, all memory of the craftsmanship with which the firm had for decades produced and renovated marble fireplaces and facade elements was lost forever (fig. 5).¹⁸

RESIDENTIAL GENTRIFICATION: 'LOFTIFICATION'

Unlike the Zaccarini marble workshop, Marbrerie Allard in Anderlecht has managed to adapt to changing market conditions. Not only has the tangible industrial heritage been preserved, but the company, founded in 1868, still operates under that name. At the end of the nineteenth century, Gustave Allard and his brother Henry built a house and business premises in Cureghem, between the Brussels-Charleroi Canal and the railroad tracks leading to the Brussels-Midi goods station. On rue Van Lint, the mosaic inscription 'Marbrerie G. et H. Allard Fr(ère)s' reveals the nature of the activities that once took place behind the wide entrance gates. The firm's two-storey, L-shaped building was accessible via a corridor that led to a large courtyard, where the marble was stored. The robust building housed cutting and polishing machines on the ground floor and assembly workshops on the first floor. Gustave's grandson continued the business here







5. Left: the bricked-up windows foreshadow the demolition of 'Marbrerie Zaccarini' in Graystraat (Google Street View). Right: the yard stacked with marble provides access to the workshop beyond (© AAM/Fondation CIVA Stichting, Brussels)



until 1973, when it was taken over by its current owner. He managed to make the company competitive on the international market by increasing the scale of production, which in turn required large-scale transport and infrastructure. So, after some one hundred years of inner-city operations, the marble works were moved to an industrial zone outside the city. The front house on rue Van Lint was converted into student housing and the new owner recently converted the workshop building into luxurious loft apartments. The marble slabs in the courtyard have made way for a swimming pool (fig. 6 and 7).

The Dobbeleer joinery on rue Sans Souci in Ixelles is another example of 'loftification'. Around 1910, Dobbeleer built a front and back house that combined living and working. The deep site allowed the two buildings to be separated from one other by a spacious courtyard that served as parking lot, loading and unloading area, and as a temporary storage space for timber. Thereafter, father and later son Lebrun continued to use their predecessor's workshop for the purposes for which it was built until 1999. In time, however, the courtyard came to be viewed as an ideal candidate for a residential conversion, and the firm ceased to exist. High ceilings, large windows and plentiful light characterize this quiet loft apartment in the middle of the densely built urban fabric of Ixelles (fig. 8).

Whereas in the first situation both buildings and company were lost, in the second, the tangible heritage value remained, in this case, virtually untouched. Because the demand for well-located, high-quality workshop space is strong and supply is continuing to decline, we do not consider the conversion of industri-

al space into purely residential forms of use to be ideal. The valuable mix of living and working that characterizes a high-quality *Baukultur* is lost and once locally produced goods and services must be sourced from much further afield. Hence, industrial heritage offers an excellent opportunity to accommodate local activities that sustain the city, either through reuse by small-scale manufacturers, or by using it as a blueprint for new construction. Based on the following two examples, we argue in favour of establishing such activities in the same building or at least on the same site. Although examples of such solutions are less numerous, they demonstrate that it is possible.

CONTINUITY OF ACTIVITY IN EXISTING BUILDINGS

The Dobbeleer joinery was part of a concentration of timber workshops in Ixelles' Flagey-Malibran neighbourhood; most of the workshops have now been converted into lofts. 19 One exception is the Vander Velden joinery workshop on rue Dillens. In 1894, the enterprising De Groef family built a house with a multifunctional back house to accommodate a bleachery and a joinery. After the father of the current entrepreneur took over the firm around 1950, he focused mainly on new-build projects. With the decreasing demand for new buildings, the company dwindled in size from 65 to about ten employees. After the son, Christian Vander Velden, took over in 1984, he focused on the renovation market and still operates from the same premise. The spacious workshop, which is equipped with both modern machines and traditional tools, has enabled him to practise his trade here to this day (fig. 9).20

On the other side of the municipality of Ixelles, another long-established construction company is

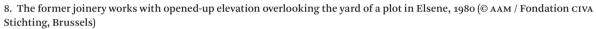


6. The inscription 'Marbrerie G&H-Allard Frs' is a reminder of the activities that once took place behind the imposing facade, 2019 (authors' photograph)





7. Left: 'Marbrerie Allard' marble works in operation, 1980 (\bigcirc AAM/Fondation CIVA Stichting, Brussels). Right: current situation with swimming pool and loft apartment, (authors' photograph)





still active. A. Bouckaert's business premises in rue du Page have been displaying various building materials for more than a hundred years. In 1860, Adolphe Laurent acquired a large plot of land on which to trade in building materials, in addition to charcoal and hay. In 1908 he filed an application to erect three buildings on this plot. The U-shaped configuration of the house with offices, stables and an open-sided warehouse allowed the building materials in the courtyard to be seen from the street. The ensemble was fenced off with a wall with two gates, which facilitated circulation. The building permit application also shows a grid of brick columns that remained undefined.²¹ This generic structure ensured that the warehouses were able to accommodate the firm's growing spatial needs over time. This turned out to be farsighted, as Laurent's son-in-law and grandson significantly expanded the business, A. Bouckaert, which was successively taken over in the 1970s and 1980s by Laurent's grandson's nephew and second cousin. To this day, the historical warehouses are used to store bricks, plasterboard, insulation panels and other products. The spacious courtyard and open elevations ensure that the materials can be loaded and sold efficiently, and placed according to their weight over three storeys (fig. 10 and 11).

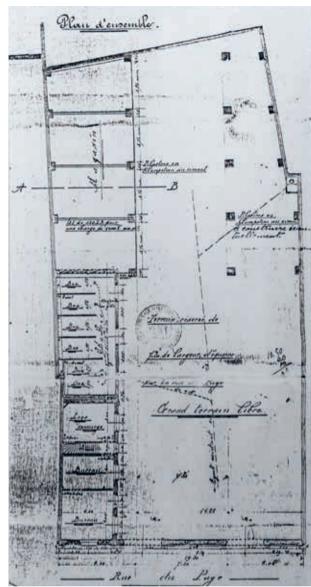
CONTINUITY OF ACTIVITY ON A SITE

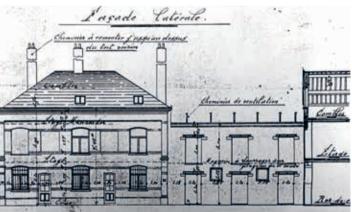
Not every industrial building is able to anticipate changing spatial requirements; technological, policy or economic developments may place new demands on the spatial layout of a business. Relocations and expansions are a direct consequence of this changing context.²² For example, the joiner Vander Velden bought an adjoining garage to park two vans, and roofed over his courtyard in order to install a large panel saw machine. Such developments show how firmly a company is anchored to its location. This connection was also illustrated by the suppliers of (timber) building materials, Lochten and Bouckaert. The strategic location of both complexes and their relationship with the public space demonstrate how certain activities started to belong to a specific place. From the dataset we can conclude that, for numerous reasons, the historical locations of construction companies have so far proven to be strategic due to their proximity to supply channels or a ready market.

The building materials company Ackermans, which was established in 1813, has remained inextricably linked to water up to the present day. The company has relocated several times, but always stayed within the Brussels port area, where transport costs for the shipment of building materials were low. Initially, the

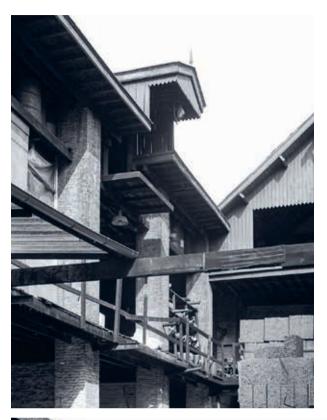
9. The Vander Velden joinery workshop, 2017 (authors' photograph)





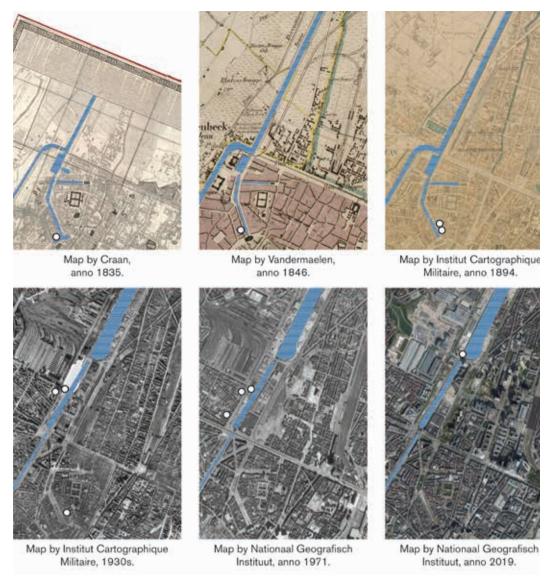


10. Building application submitted by A. Laurent in 1908 (Stedenbouw [town planning] archives of Elsene city council, T.P. 489/1908)





11. Left: A. Bouckaert building materials in Elsene, 1980 (© AAM/Fondation CIVA Stichting, Brussels). Right: the original infrastructure still in use for displaying A. Bouckaert's building materials, 2019 (authors' photograph)



- 12. Overview of successive canal-side relocations of Ackermans building materials firm (adapted by authors)
- 13. V. Ackermans materials depot on the west bank of the canal, 1980 (© AAM/Fondation CIVA Stichting, Brussels)



company was located on the 'Salt' and later the 'Bricks' quay in the old port in the city centre, but at the beginning of the twentieth century, the company expanded outside the city centre. The construction of a canal between Brussels and Charleroi in the early 1830s had encouraged port and industrial development along its length, mainly in Molenbeek-Saint-Jean. In the new port area, at Quai des Matériaux, Quai de Willebroeck, Avenue du Port and Quai des Fabriques, the Ackermans company found suitable, more spacious sites. For example, the company owned several complexes on both sides of avenue du Port, which can be seen as a single entity. Building materials were unloaded from ships and stored in the open air along the water (fig. 12 and 13).

It has not escaped the attention of the Brussels port authorities that the company has defined the spirit of the place for many years.23 In collaboration with Ackermans, which after several mergers and acquisitions is now called Mpro, the port authorities constructed a large-scale industrial building on Bassin Vergote where all trade in building materials could be concentrated. The new building, with its recognizable roof typology and canal-side access, does full justice to the activities and history of Ackermans. Although not all of the former business premises have been preserved, the building materials trade remains active along the canal today. The company can continue to benefit from its excellent location, as well as from a well-designed new building inspired by the previous one (fig. 14 and 15).

CONCLUSION

The gradual disappearance of the small-scale and overlooked industrial heritage of construction companies in Brussels constitutes a loss of more than tangible heritage. The case studies show how both internal and external factors play a role here: residential redevelopment is a lucrative investment. On the one hand, redevelopment can entail the complete demolition of valuable industrial heritage, such as the premises of the Zaccarini marble works; on the other it may result in a purely residential redevelopment of business premises that no longer meet contemporary needs, as in the case of Marbrerie Allard. Although tangible heritage values at the Allard marble works and Dobbeleer joinery have been partially preserved, they do not represent an ideal situation. After all, urban real estate dynamics threaten the survival not only of valuable industrial heritage, but also of small-scale business activity. The forced sale of the Lochten timber yard shows how increases in land value can threaten the continued survival of productive activities in the city.

Nevertheless, because these small-scale manufacturers cater to the basic needs of the city, their embed-



14. Ackermans' work site has been converted into an educational centre for the construction sector, 2019 (authors' photograph)



15. Materialendorp Mpro by TETRA architecten on Vergotedok, 2019 (authors' photograph)

ding in the urban fabric is highly desirable and delivers the vital mix of living and working that characterizes a high-quality *Baukultur*. Policymakers and academics have recently called for the preservation and reintegration of productive activities in the city. This can be more readily accomplished on existing sites in suitable locations where such activities have been carried out for decades if not centuries, which allows the continuity of an intangible industrial heritage value that is at least equivalent to the preservation of the tangible heritage with the loss of productive functionality. As the Dublin Principles advocate, industrial heritage should continue to be used as productively as possible, as was the case with the Vander Velden joinery and the Bouckaert building materials firm. Their favourable

location close to building sites, the well-thought-out business infrastructure and ability to adapt to changing market conditions allowed them to remain in the city, representing a symbiosis between economic interests and tangible and intangible heritage values. Whether the preservation of the tangible heritage or the productive use comes first must be considered on a case-by-case basis, in relation to the context and the company in question. In line with the objectives of the Davos Declaration, heritage may, as in the case of

the Mpro building materials company, serve as a reference point for new interventions in a suitable location in order to give the *Baukultur* of the productive city a sustainable future.

This article considers the adequacy of a purely material approach to industrial heritage and advocates further research into how each country's heritage legislation might also recognize the intangible heritage values of historical activities in certain locations or in historical industrial buildings.

NOTEN

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- 7 Despite repeated pleas for such a scientific basis for the study of industrial heritage by Linters in 1987, Nijhof and Scholliers in 1996 and Becuwe et al. in 2010, so far there has been scarcely any change: A. Linters, De wortels van Flanders Technology: industrieel erfgoed, industriële archeologie in Vlaanderen, Leuven: Kritak, 1987, 275; E. Nijhof and P. Scholliers, Het tijdperk van de machine. Industriecultuur in België en Nederland, Brussels: VUBPress, 1996, 209; F. Becuwe et al., Onderzoeksbalans Onroerend Erfgoed Vlaanderen - Industrieel erfgoed, 2010: https://onderzoeksbalans.onroerenderfgoed.be/onderzoeksbalans/ bouwkundig/architectuurgeschiedenis/ industrieel
- 8 They were established in 2011 by TICCIH
 (The International Committee for the
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'BAUKULTUR' IN BRUSSELS

SMALL-SCALE CONSTRUCTION INDUSTRY HERITAGE AS A VECTOR FOR THE PRODUCTIVE CITY

FREDERIK VANDYCK AND MATTHIJS DEGRAEVE

Brussels' urban space, like that of many other cities, is dotted with evidence of a productive industrial past. The activities that took place there were generally not geared to mass production for export, but to small-scale manufacturing aimed at supplying the needs of local city dwellers. That small-scale manufacturing industry included members of the building trade such as contractors, joiners and builders' merchants who catered to the demand for housing in an ever-expanding city. Their business premises formed a vital link in the creation and renovation of the urban fabric.

This article focuses on the values of small-scale industrial heritage from the building trade, which is under enormous pressure in a city like Brussels. The dynamics of constantly rising real estate prices make residential redevelopment a lucrative investment. Thanks to gentrification, many workshops are being converted into housing and former warehouses are falling prey to large-scale property development.

Real estate dynamics, scaling-up and changing market conditions are also contributing to the disappearance of the small-scale, live-work fabric that fosters a beneficial mix of functions. The expertise and skills that for centuries have supplied the basic needs of the city in a sustainable manner are then lost. In light of growing traffic congestion and unemployment, academics and urban planners are becoming increasingly convinced of the need for permanently embedded, city-servicing economic actors like building businesses. Thus, even today, small-

scale industrial heritage is vital to the functioning of the urban economy, in that offers the possibility of spatially organizing or reorganizing city-servicing activities within a dense urban fabric.

Inspired by integrated concepts of heritage, we therefore argue in favour of a broadening of industrial heritage values aimed at anchoring the use of such locations in time and space. We take issue with an exclusively material approach to industrial heritage by pointing out the immaterial heritage value of a continuity of productive use.

After a brief theoretical reflection on the value of small-scale industrial heritage in the city, we examine the historical evolution of Brussels' industrial heritage at the macro level between 1890 and 1970, the period in which the development of the suburbs of Brussels was in full swing. We use a series of exemplary cases to illustrate the different trajectories of continuity and discontinuity of heritage on the one hand, and productive use of building trade locations in Brussels on the other. We also try to get to grips with the motivations of businesses that abandon the city, cease to exist or manage to adapt to volatile market conditions.

This article uses a selection of cases to challenge a purely material approach to industrial heritage and makes the case for further research into the question of how individual heritage legislation might also recognize immaterial heritage values in historical business activity on a particular site or in an industrial building.