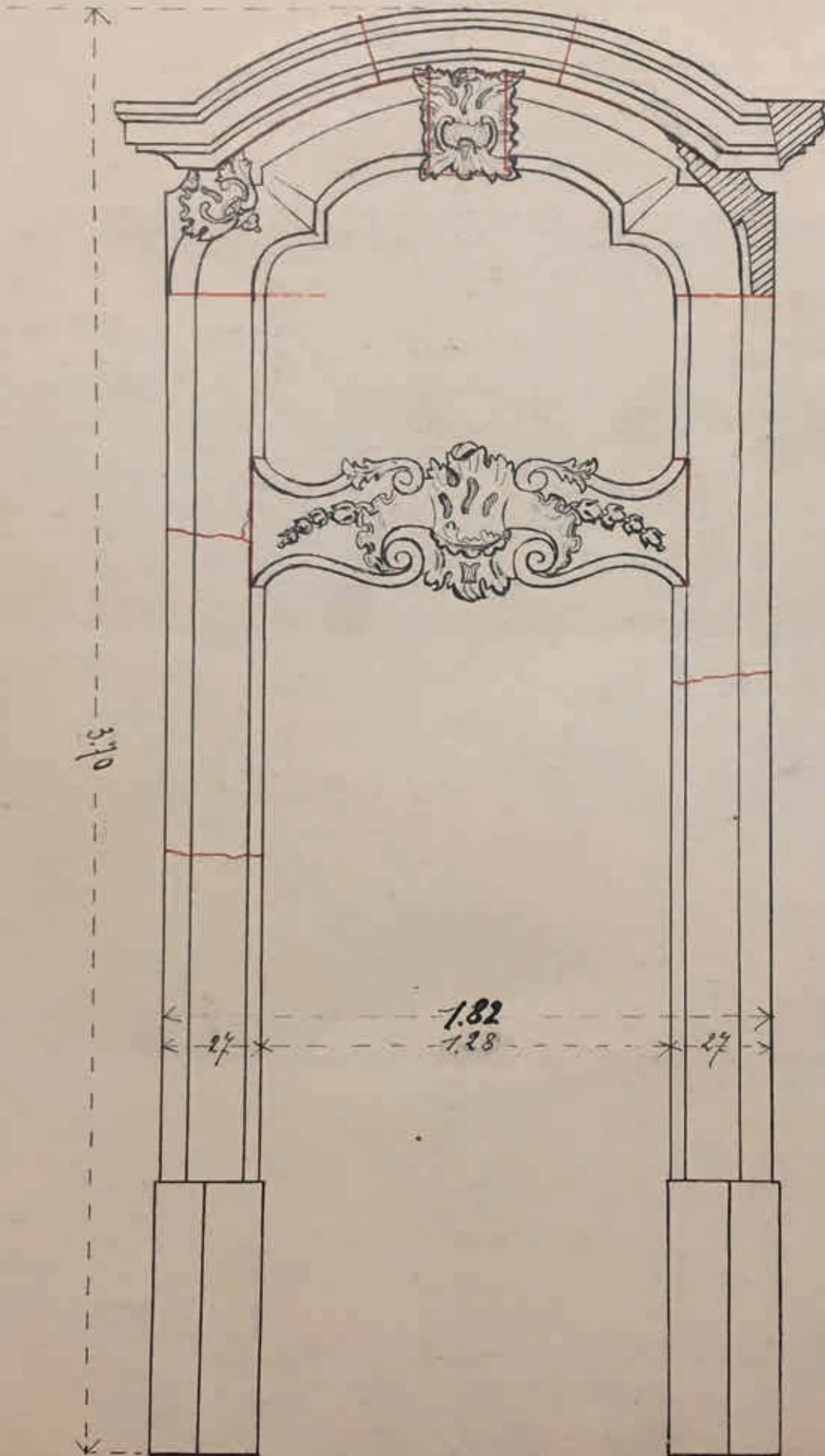


PORTE EN PIERRE BLEUE
PROVENANT DE LA RUE DES LONGS GHARLOTS N°14
DEMOLIE EN 1927



FROM ART OBJECT TO RUBBLE

MUNICIPAL POLICY ON DEMOLITION MATERIALS IN BRUSSELS (1860-1940)

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In *Buildings Must Die* Stephen Cairns and Jane Jacobs stress that buildings, as material entities, are constantly and inescapably subject to processes of economic, social and cultural revaluation. This revaluation in turn leads to decisions regarding preservation, renovation or demolition of buildings or parts of buildings.¹ In the literature and in architectural practice revaluation usually occurs at the scale of entire buildings or larger urban areas, with scant attention being paid to the revaluation of the building components and building materials that are part of those larger structures. The revaluation of a building and that of its elements are often at odds. A building considered obsolete or worthless may well contain economically valuable components. Moreover, buildings and their component parts differ with respect to their propensity to disappear. Although architectural-historical research into the demolition of buildings abounds with terms like ‘destruction’ or ‘tabula rasa’, in ‘La démolition en chantier’ Hélène Janniére emphasizes that these kinds of approach overlook important material and social aspects of demolition.² Matter persists: demolition materials do not disappear but are instead relocated or transformed. This allows them to be reused, recycled or dumped as waste, depending on the value ascribed to them. As such, a rigorous valuation of demolition materials is crucial to an effective policy on the management and prevention of construction waste. Focusing on building components and materials allows for an alternative revaluation of heritage in decisions on preservation, renovation or demolition. In the approach taken by Allison Arlotta and Susan Ross, for example, heritage values and reuse practices complement and enhance one another.³

The quest for an alternative revaluation could benefit greatly from a better understanding of the valuation of demolition waste over the years. Since the 1930s architecture and art historians have made a special study of ‘spoliation’ – the practice of visibly reusing elements of old structures – in the process demonstrating the symbolic value of demolition materials.⁴ The focus of such research has recently widened to take in the different forms of reuse in historical construction practices, with the value of demolition materials being linked to economic benefits and supply problems.⁵ However, the main focus has been on materials that were reused, while materials that lost their value have received scant attention. As a result, the relation between the valuation and the loss of value of demolition materials has been insufficiently explored. That interplay is particularly important for the nineteenth and twentieth centuries when construction waste started to become a major issue.

This article examines the impact of the valuation of demolition materials on its eventual destination in the city of Brussels between 1860 and 1940, based on an analysis of municipal policy on demolition. The 1860s marked a turning point in demolition policy as it was then that the Brussels city council started to carry out large-scale demolitions as a radical solution to the various problems besetting the old city centre, such as overcrowding and lack of hygiene.⁶ Because the city of Brussels was itself the client in these major demolition projects, the city administration had a direct economic interest in the processing of the considerable quantities of demolition materials generated. In addition, the administrations’s responsibilities regarding the orderly appearance of its streets – the streetscape – and the rising local interest in heritage played an important role in demolition policy. These converging interests shaped the policy on demolition materials and remained fairly consistent up to the Second World War, after which the economic importance of demoli-

◀ 1. Sketch from the inventory of preserved objects from demolished buildings stored in municipal depots in Sint-Jans-Molenbeek (Brussels Archives, ARCH 808)

tion materials gradually became less relevant and the heritage landscape in Brussels changed.⁷

After a brief outline of the legal and administrative framework, the article describes the definitions used by the city administration to categorize the different types of demolition materials. It then proceeds to look in detail at the valuation criteria and methods used for each category and at what impact these factors had on the eventual destination of the materials concerned. In the process it becomes clear why different types of demolition materials, sometimes derived from the same project, were dealt with in different ways. The policy pursued by the Brussels city administration was in line with European trends whereby municipal governments intervened in the urban fabric by means of demolition campaigns.⁸ The findings in the case of Brussels consequently contribute to a better understanding of large-scale urban regeneration projects and the relation between urban development, heritage preservation, reuse and waste management.

POLICY FOR CONTINUOUS DEMOLITION

During a council meeting in June 1921, Brussels mayor Adolphe Max drew attention to the negative consequences of large-scale public works on the image and the liveability of the Belgian capital: 'Il est inadmissible, en effet, que la capitale continue à offrir de tous côtés le spectacle de quartiers en ruines, de terrains inutilisés et de chantiers laissés à l'abandon.'⁹ His words confirmed the prevailing perception of Brussels as a permanent demolition site. Since the 1860s the city had changed dramatically as a result of large-scale works initiated by local and national authorities. Projects like the vaulting of the River Zenne from 1866, the redevelopment of the Onze-Lieve-Vrouw-ter-Sneeuw working-class district from 1876, and the construction of the North-South railway line in the period between 1902 and 1952 entailed the demolition of hundreds of buildings.¹⁰ These extensive demolition works often spanned several years, resulting in desolate city districts and swathes of vacant land where all that remained was demolition materials (fig. 2).

In 1867 the municipal government's role in coordinating and redeveloping the city increased as a result of an amendment to the 1858 Expropriation Law. This legal framework, originally intended to compensate individual property owners, evolved in 1867 into a powerful instrument that enabled the wholesale expropriation of entire districts. It gave the Brussels city council the power to realize extensive infrastructural projects: the expropriated districts were razed to the ground to facilitate the construction of new roads and sewerage systems while the vacant plots of land could be sold off to developers and private parties. The city council was now able, via a combination of expro-

priation and demolition, to restructure the densely built and fine-grained urban fabric.¹¹

The planning and coordination of demolition projects accounted for a substantial share of the daily activities of the Public Works Department. The Brussels city archives testify to the meticulous documentation of the coordination of demolition works and the processing of demolition materials. Regulations relating to demolition materials were included in the city's building code and as such applicable to all building activities in the city of Brussels.¹² In addition, the city administration could include supplementary regulations in the special specifications for projects for which it was the client.¹³ Each of these special specifications (*cahier des charges spécial*), were derived from the general specifications for Brussels municipal projects (*cahier des charges général*), which were in turn based on the provincial and national specifications.¹⁴ The enforcement of these regulations entailed considerable administrative efforts on the part of the Public Works Department; some two thousand documents containing records, reports and correspondence for the period 1864-1907 are held in the city archives.¹⁵

DEFINING DEMOLITION MATERIALS

Archival documents shed light on the terminology used consistently by the municipal administration during the period under study to designate materials generated by demolition. The materials were divided into three main categories: (1) treasures, art works, objects relating to numismatics and natural history, and all other objects of any value ('trésors, objets d'art, de numismatique, d'histoire naturelle et tous autres objets ayant quelque valeur'), (2) materials and objects ('matériaux', 'matériaux à provenir de démolition', 'objets'), and (3) rubble, soil and waste ('décombres', 'gravois', 'débris', 'terres', 'déchets'). Although the documents do not provide any definitions of these terms, the wide-ranging nature of the categories indicates that demolition materials were broadly conceived: it encompassed both complete building fragments and separate materials and rubble. It is interesting to note the use of the term 'waste' for a component of a particular category, unlike today's generic term 'construction waste', which covers pretty much all demolition materials. The categories remained virtually unchanged throughout the period 1860-1940, a consistency that suggests a degree of policy stability.

The categorization of demolition materials implies a value hierarchy. The singling out of treasures, art-works and objects of value is a tacit acknowledgement of their artistic or iconic value. The 'materials and objects' category could also indicate the possibility of preservation or reuse. By contrast, the third category, rubble, soil and waste, encompasses materials that are



2. At the beginning of the twentieth century parts of the working-class district Putterij were demolished to make way for the North-South railway line. The vacant plots of land, including remnants of walls and abandoned demolition materials, remained untouched for a long time (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)

probably not all suitable for reuse which also need to be covered by policy. Below we discuss in more detail the forms and appearances of each category in the city of Brussels' archival documents, the value assessment and, contingent on that, the fate of these materials.

TREASURES, ARTWORKS AND OBJECTS OF VALUE

In its demolition project specifications, the city stipulated that valuable objects discovered during demolition and excavation works, including treasures, art works, objects relating to numismatics and natural history, and all other objects of any value, would automatically become the property of the city. Included in this first category of demolition materials were iron railings, marble counters, fireplaces and various stone architectural decorations.¹⁶ In practice such objects were often identified in advance and the city administration took specific measures to remove them before work commenced or to have the demolition contractor deliver them to the city during the demolition process.

The disassembled elements were regarded as objects

that embodied the history or the identity of the city. To valorize that historical significance they needed to be withdrawn from the construction sector use cycle. The efforts made to acquire and preserve these objects can consequently be understood as a response to their possible transformation or disappearance. There were some individuals within the municipal administration who dedicated themselves to this task. For example, from 1860 onwards Alphonse Wauters, municipal archivist from 1842 to 1898, promoted the idea of a municipal museum charting the history of Brussels. As well as archival records, the museum would house archaeological finds and elements from demolished houses. This ambition, which was wholly in tune with the nineteenth-century European trend for city history museums, was eventually realized in the 1880s. Thanks to the combined efforts of Wauters and mayor Charles Buls, the Brussels city museum was inaugurated in 1887.¹⁷ The demolition materials that ended up in the museum had been identified by public servants tasked with inspecting the expropriated build-

ings earmarked for demolition. Among these was Pierre-Victor Jamaer who during his term of office as city architect (1864-1895) played an important role in the identification of elements of artistic or historical value.¹⁸

In 1903 the identification of valuable elements was boosted by the founding of the Comité d'études du Vieux Bruxelles (1903-1939). The Comité represented the Brussels branch of various heritage organizations and received financial support from the city administration, but it operated independently of the official

heritage preservation institutes. It had limited influence on decisions regarding preservation or demolition, focusing instead on the visual documentation of buildings and building fragments by means of photographs, with a special emphasis on elements with an 'historical character' and 'artistic' or 'picturesque' value.¹⁹ This photographic documentation probably played an important role in the identification of valuable elements at risk of disappearing due to major projects like the North-South railway line (figs. 3-5). The Comité also championed the physical preservation of



3. The photographic records of the Comité d'études du Vieux Bruxelles were also intended to document potentially valuable elements. Between 1903 and 1938 various architectural details of buildings under threat of demolition were photographed, like this 1910 example of a staircase element (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)



4. Dismantled staircase components (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)



5. Dismantled inner door (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)



6. Photo taken by the Comité d'Etudes du Vieux Bruxelles of part of a staircase from Terarkenstraat 12, which was later, in 1909, stored in the municipal depots in Sint-Jans-Molenbeek (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)

objects: former mayor Charles Bul, who headed the Comité from 1906 to 1914, proposed the establishment of an open-air architectural history museum in Jubelpark, where interesting building fragments could be displayed.²⁰ Although the open-air museum was never realized, the Comité's efforts undoubtedly contributed to the preservation of over two hundred architectural elements in the municipal depots in Sint-Jans-Molenbeek (figs. 1, 6).²¹

The Comité went a step further by also advocating the reuse of these elements in reconstructions. The idea was that when buildings of historical value could no longer remain in their original location, they would be reconstructed elsewhere using the original building materials.²² However this reconstruction practice was not without its opponents: the leading architectural association, the Société Centrale d'Architecture de Belgique, considered this approach obsolete.²³ During the twentieth century opposition to this practice grew within heritage organizations as well. In 1931, the Charter of Athens condemned the reconstruction of entire buildings, although the use of original materials in the reconstruction of partially collapsed listed buildings was still recommended. In 1964 the Charter of Venice made it clear that an historical monument is inextricably linked to its context and that the relocation of such a structure or parts thereof is consequently unacceptable.²⁴

From the end of the nineteenth and for most of the twentieth century the practice of dismantling building elements and reusing them in a new setting was common across Europe in the context of the redevelopment of old city quarters.²⁵ In the Netherlands, for example, the Amstelodamum Society and the Commissie van Stadsschoon were very active on this front from 1900 onwards.²⁶ The practice, rooted in the history of spoliation from Antiquity to the present day, draws attention to the symbolic significance of the reuse of building elements. It emphasizes the display of identity, the cherishing of memories, the safeguarding of visual continuity and the preservation of craftsmanship. Despite the large-scale redevelopment activities in the city centre, there were some members of the Brussels city administration who ascribed symbolic value to historical demolition materials and championed their preservation and reuse. Salvaging these elements with historical, artistic or picturesque value was an interim measure in the process of finding a new home for them in the city where their values could be shared with the general public. They represented only a small portion of the demolition materials given that valuable objects were by definition rare.

MATERIALS AND OBJECTS

Photographs of the demolition works in the historical city centre show the preponderance of materials and objects without specific symbolic or artistic value, such as timber, brick, stone and cobblestones (figs. 7-9). The city authorities employed a variety of procedures to determine the economic and use value of these materials and objects. In the general specifications they required contractors to treat such materials and objects with care and to either repair any damage or to replace them with similar materials in order to facili-



7. Demolition materials are visible in the photographs taken during demolition works in Brussels between 1860 and 1940. This photo, taken in 1907, shows sorted timber beams, bricks and demounted windows (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)

8. The processing and transport of disassembled timber planks and bricks c. 1905 (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)





9. Sorted roof tiles and timber beams ready for transport in 1911 (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)

tate reuse.²⁷ The reuse of building materials on the demolition site effectively reduced the cost of the reconstruction project, but this was only possible when demolition and reconstruction were tightly coordinated. The strategy was less feasible in the case of large-scale urban renewal projects, which often involved long hiatuses between demolition and reconstruction. Moreover, the demolition client (the city of Brussels) usually differed from the reconstruction client (property developer or private parties), in which case the city had to leave behind a vacant plot after demolition.

In order to monetize the economic value of these materials without reusing, transporting or storing them itself, the city employed a strategy whereby the demolition contractor became the owner of the demolition materials via a financial transaction. This strategy is evident from the special specifications for municipal demolition projects with titles like 'Specifications for the sale, by order of demolition, of the houses' or 'Clauses and conditions under which the City Council shall assign the materials acquired through demolition' (fig. 10).²⁸ This 'sale' comprised

all demolition materials with the exception of specific objects of value from the first category.²⁹ From 1884 the city administration introduced additional exceptions that resulted in water and gas meters, pipes and systems being excluded from sale.³⁰

The council awarded demolition projects to the contractor who offered them the best financial deal on the value of the demolition materials and on the labour and transportation costs. Since the value of the demolition materials nearly always far exceeded the labour costs, the city compensated the contractors in demolition materials and received a sum of money on top of that. Of the more than one hundred specifications consulted, dating from 1864 to 1922, there was only one instance in which the city paid the contractor: in 1890 it paid a contractor the sum of 25 Belgian francs (BEF) to demolish a building.³¹ In another case the city awarded a demolition job for the sum of 0 BEF.³²

To ensure that the materials were sold at a fair price, building inspectors drew up estimates.³³ An estimate from 1883, for example, reveals that the value of a roof tile was 0.02 BEF, while oak roof trusses were valued at fifteen BEF per piece by the building inspector. The

financial value of bricks was more difficult to determine, however, because the quality could not always be judged visually. Inspectors assigned a 'speculative' value of 35 BEF to the sum total of bricks. Other elements, such as timber beams, window frames, doors, stair treads and metal objects of iron, zinc and lead were assigned a 'fixed' financial value. Demolition materials like rubble, soil and waste were not included in such estimates, suggesting that they brought in little or no income (fig. 11).³⁴ In cases where the demolition contractors' quotes were considerably lower than the estimated proceeds, the city could decide to postpone the sale and to call for new offers. Initially the city shared the estimates with interested contractors, but

around 1880 the city architect, Pierre-Victor Jamaer, explicitly requested that it stop doing so, possibly with a view to attracting higher offers.³⁵ The city endeavoured to maximize its income by fostering competition among contractors and advertising details of the upcoming sale.³⁶

The income from the sale of these demolition materials did not quite cover the high expropriation costs associated with large-scale urban redevelopment schemes.³⁷ Although this income peaked in some years, as in 1861 when the sale of demolition materials generated more than one per cent of total municipal income, between 1860 and 1940 it averaged only 0.2 per cent of total income.³⁸ In 1890 a municipal public ser-

10. Poster for the 'sale of buildings subject to demolition'. The city council awarded the demolition of expropriated buildings via the transfer of materials and a financial transaction during a public auction. The city hoped to attract as many interested buyers as possible by distributing these posters. (Brussels Archives, Public Works, Maisons à charge de démolition 1885)

<p>VILLE DE BRUXELLES</p> <h1 style="text-align: center;">VENTE</h1> <p style="text-align: center;">DE</p> <h1 style="text-align: center;">BATIMENTS</h1> <h2 style="text-align: center;">à charge de démolition</h2> <p>Le VENDREDI 5 JUNI 1885, à une heure, il sera procédé, dans l'une des salles de l'Hôtel de Ville, à l'adjudication, au plus offrant et sur mise à prix, des matériaux à provenir de la démolition de maisons, divisée en quatre lots, savoir :</p> <p>1^{er} Lot. Maisons rue de l'Astre, n^{os} 26, 28 et 30. 2^e Lot. Maisons rue de l'Astre, n^{os} 36, 38 et 40. 3^e Lot. Maisons rue du Manège, n^{os} 6 et 8. 4^e Lot. Maisons rue Auguste Orts, n^{os} 36, 38, 40 et 42, et Maisons rue des Poissonniers, n^{os} 22, 24, 26, 28 et 30.</p> <p>Une garantie de 100 francs devra être déposée séance tenante par le dernier enchérisseur.</p> <p>Les soumissionnaires peuvent prendre communication du cahier des charges dans les bureaux de l'Administration communale (5^e Division, rez-de-chaussée), tous les jours non fériés, de 10 à 2 heures.</p> <p>Bruxelles, le 22 mai 1885.</p> <p style="font-size: small;">Tous les détails Le Secrétaire, A. DWELSHAUVERS.</p> <p style="text-align: right; font-size: small;">Le Collège, BULS.</p>	<p>STAD BRUSSEL</p> <h1 style="text-align: center;">VERKOOPING</h1> <p style="text-align: center;">VAN</p> <h1 style="text-align: center;">GEBOUWEN</h1> <h2 style="text-align: center;">op last van afbraak</h2> <p>Op VRIJDAG 5 JUNI 1885, te één ure, zal er, in eene der Stadhuiszalen, overgegaan worden tot de toewijzing, aan den meestbiedende en op prijsstelling, der bouwstoffen voort te komen van de afbraak van huizen, in vier loten verdeeld, te weten :</p> <p>1^e Lot. Huizen der Sterrestraat, n^{os} 26, 28 en 30. 2^e Lot. Huizen der Sterrestraat, n^{os} 36, 38 en 40. 3^e Lot. Huizen der Rijschoolstraat, n^{os} 6 en 8. 4^e Lot. Huizen der Auguste Ortsstraat, n^{os} 36, 38, 40 en 42, en Huizen der Vischverkoopersstraat, n^{os} 22, 24, 26, 28 en 30.</p> <p>Eene borgsom van 100 frank zal oogenblikkelijk door den laatsten aanbieder moeten gestort worden.</p> <p>De aanbieders mogen kennis nemen van het lastenboek in de kantoren van het Gemeentebestuur (5^e Afdeeling, beneden), alle werkdagen, van 10 tot 2 ure.</p> <p>Brussel, den 22 Mei 1885.</p> <p style="font-size: small;">VAN NIEUW DIT WILLEN De Secretaris, A. DWELSHAUVERS.</p> <p style="text-align: right; font-size: small;">Het Collège, BULS.</p>
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Bruxelles, 17 Jules Bataillon, Imprimeur de la Ville.

*Valueur approximative des matériaux à provenir
 de la maison à démolir place du Jeu de Balle
 N° 38 angle vers la rue des Pradis.*

1 ^e	Environ 1000 vieilles tuiles à 202 fr	20.00
2 ^e	Deux charpentes en creux chêne à 15.00	30.00
3 ^e	60 chevrons " à 0.50	30.00
4 ^e	2 poutres " 7.50	15.00
5 ^e	80 gites " 1.00	80.00
6 ^e	12 Chassies " 4.00	48.00
7 ^e	9 portes - - - - -	2.00 = 18.00
8 ^e	30 marches d'escalier 1.00	30.00
9 ^e	5 seuils de fenêtre 1.50	7.50
10 ^e	Vieux fer d'ancrage - - - - -	7.50
11 ^e	Objets divers, tel que zinc plomb etc etc - - - - -	20.00

total fr 315.00
Impression pour la valeur des lignes 35.00
Somme totale fr 350.00

11. An 1883 estimate of the value of the materials and objects in a building on Vossenplein due to be demolished by the council. The estimate covered a variety of building materials, such as roof tiles, roof trusses, beams, doors and stair treads (Brussels Archives, Public Works, Maisons à charge de démolition 1883)

vant questioned the benefit of a public tender for demolition because he had estimated that the major part of the revenue would be swallowed up by the cost of advertising the sale, including the printing and distribution of posters.³⁹ The resale of the land freed up by demolition proved to be a more important source of income, especially since the renewal of neighbourhoods caused land prices to rise.⁴⁰ Nevertheless, discussions about the sale of demolition materials in the context of financing large-scale urban redevelopments show that the Brussels city council recognized the value of these materials in terms of their contribution to municipal finances.⁴¹ What is more, the demolition materials functioned as a form of guarantee or collateral in situations in which demolition contractors failed to fulfil their obligations, as in the case of delayed work or unfinished projects. In such cases the city could seize the materials and complete the demolition itself. This option did not appear in special specifications after 1873.⁴²

Although the city administration had no say over the reuse of demolition materials once ownership had passed to the contractor, the financial value it had assigned the materials did influence their eventual destination. Because the contractor was paid in kind for his work he needed to turn a profit via the demolition materials, either by using them in other projects, or by selling them on. This motivated contractors to dismantle buildings carefully. In addition to the financial rewards this practice garnered for the city, the sale of demolition materials ensured the retention of their use value and consequently their continued existence. It meant that demolition materials could be usefully redeployed in various ways, even when the building from which they had come was deemed undesirable, unhygienic or inconvenient. The persistence of this practice throughout the period under study demonstrates that potential buyers continued to be interested in demolition materials. There were however situations in which demolition contractors had difficulty selling or transporting the materials, especially in winter when transport or building activity in general was hampered by adverse weather conditions.⁴³ In certain cases the city would then offer demolition contractors the opportunity to rent vacant plots so that they could continue their sales activities and the materials could still be put to good use.⁴⁴

A previous study found that the reuse of building materials was common practice in Brussels and elsewhere up to and including the nineteenth century.⁴⁵ An analysis of the Brussels city administration's policy between 1860 and 1940 shows that this continued to be an important practice in the first half of the twentieth century. The scale of the expropriations and demolition works in this period also indicates that

considerable quantities of demolition materials were generated, managed and monetized by the city administration.

RUBBLE, SOIL AND WASTE

Demolition generated not just reusable and saleable materials, but also rubble, soil and waste that the city did not quantify and for which it had not formulated specific valuation criteria. This suggests that rubble, soil and waste were regarded as less important by the city administration. Nevertheless, contractors were permitted to use the soil to fill in construction pits, especially in cases where the city required them to leave the site level with the street after demolition work was complete (fig. 12).⁴⁶ Even so, the quantity of rubble and soil that could be utilized on the demolition site was limited; any surplus had to be removed together with reusable materials and objects. A subtle difference in the wording used in the city's building regulations sheds light on the distinction and on the anticipated destination of the two categories: materials were 'transported' ('transport') while rubble and soil were 'removed' ('enlèvement').⁴⁷ Whereas the first implies an intention to 'relocate' the demolition materials and so give them a new function elsewhere, the second does not.

The processing of rubble and waste entailed additional costs for the contractor, but it was also in the interests of the municipal government to minimize the quantity. As well as aesthetic concerns about the townscape, there were security considerations: poorly managed demolition materials could pose a danger on public roads and disrupt traffic. This also applied to materials and objects from the second category that contractors failed to sell or transport in a timely manner. Reports by police officers and Public Works officials detail instances of materials and rubble being illegally left behind by demolition contractors, as well as incidents of vandalism and theft of demolition materials.⁴⁸ Such materials were also used by children to make improvised structures which they then delighted in knocking down again – described by one local newspaper as 'jouer Mont des Arts', a reference to one of the vacant sites still awaiting reconstruction.⁴⁹ To remedy these problems the city incorporated into its building regulations obligations relating to public safety and urban order, including the use of fencing and scaffolding, to prevent demolition materials from ending up on the public road (fig. 13).⁵⁰ In addition, contractors were required to stack demolition materials neatly against buildings or fences and to remove them on a daily basis.⁵¹

Although the building regulations and specifications addressed logistical problems, there were no long-term solutions for demolition materials that



12. The city council asked demolition contractors to fill cellars, cesspits and other pits with rubble and soil to street level. This resulted in a hilly landscape that followed the winding streets of the old districts, as can be seen here in a 1910 photo of the former Putterij district (photo Comité d'Etudes du Vieux Bruxelles, KIK-IRPA, Brussels)



13. Demolition contractors were obliged to erect fences and structures around the site to prevent rubble from ending up on the public road, as here during the demolition of the Sint-Rochus district towards the end of the nineteenth century (photo Narcisse G., CIVA Collecties Brussel)



could not be used immediately in new structures or building sites. Other historical documents, such as records, reports and invoices from the Public Works department, are similarly short on information about what happened to surplus demolition materials. Although contractors' invoices state the cost of transporting these materials, they provide no information about their eventual destination.⁵² This might suggest that surplus demolition materials did not constitute a major problem for the city. One reason for this could be that most demolition materials were reused, so that little surplus material remained. It is also feasible that surplus demolition materials were dumped, but because this did not impact greatly on urban space it was not a matter of urgency for the city.

CONCLUSION

Research into the Brussels city administration's policy between 1860 and 1940 reveals a multilayered approach to demolition materials, in which several valuation processes were combined. The administration divided demolition materials into three main categories that reflected a clear hierarchy of values. This hierarchy was closely related to the new owner and the destination of the demolition materials. Particular attention was paid to architectural and artistic objects from expropriated buildings that were identified by the building inspector and by members of the Comité d'Etudes du Vieux Bruxelles, after which they became the property of the city. They were salvaged, conserved – some pieces can still be seen today in the Brussels City Museum – and reused. These local government policies were embedded in the emerging heritage practices of the late nineteenth century, where remembrance of the past through objects was gaining in importance. In the case of generic materials lacking any special artistic or historical value, the city transferred ownership to the relevant demolition contractors. This transfer, as well as being financially advantageous for the city, also relieved it of the obligation to process, reuse, transport or store the materials. The funds accrued could be used to partly offset the significant expropriation costs associated with urban redevelopment.

The few references to rubble and waste in the administrative documents could be interpreted as a lack of policy on this point. However, the dynamic relation between the three categories of demolition materials should not be overlooked. The sale of demolition materials incentivized reuse which in turn reduced the proportion of waste. This also meant that the value of materials with the potential for reuse decreased when no buyer or suitable destination could be found. So although there was in theory a distinction between the three defined categories, demolition materials were not treated consistently. The final destination of demolition materials depended on cultural, financial and practical considerations and on specific situations and contexts. Although policy remained stable throughout the period 1860 to 1940, conveniently benefiting from the prevailing reuse culture in order to minimize waste, this did not mean that building practice remained unchanged. The policy, based on the 'intrinsic' value of demolition materials and indirectly dependent on private parties' interest in reuse to minimize rubble and waste, became less and less effective in a changing context. After the Second World War such a policy was increasingly out of tune with practical reality, where the financial advantages of reuse were steadily diminishing.

This study contributes to the growing recognition of the extent of the use of demolition materials in the history of architecture and construction. It also highlights the need to look beyond reused demolition materials and to widen this historical perspective to include materials that lost their value. Our study makes it clear that even when reuse is widespread, construction waste is ever-present and plays a role in shaping valuation practices. By the same token, in both the recent past and today, the policies and rules regarding demolition materials are geared more to waste management than waste prevention, especially in relation to recycling rubble and out of concern for toxic substances. Insight into historical practice shows that an awareness of the value of demolition materials is essential to the development of a policy geared to preventing rather than managing construction waste.

NOTES

- 1 S. Cairns and J.M. Jacobs, *Buildings Must Die. A Perverse View of Architecture*, Cambridge MA 2017, 49.
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- 6 M.F. Wagenaar, 'Het staatslandschap van de hoofdstad. De transformatie van Parijs, Brussel, Rome en Boedapest tussen 1850 en 1914', in: M.F. Wagenaar (ed.), *Stedebouw en burgerlijke vrijheid. De contrasterende carrières van zes Europese hoofdsteden*, Bussum 1998, 10-112.
- 7 L. Reyniers, S. Van de Voorde and I. Wouters, 'Small but significant. Tracing the emergence and evolution of the demolition profession in Brussels (1860-1970)', in: *Proceedings of the 8th International Congress on Construction History*, Zurich 2024; G. Meyfroots, 'Het Comité d'études du Vieux Bruxelles (1903-1939). Vier decennia in de marge van de monumentenzorg', *Monumenten & Landschappen* 20 (2001) 2, 8-33.
- 8 Wagenaar 1998 (note 6).
- 9 Stadsarchief Brussel (SAB), Gemeentebblad 1921, Council meeting of 20 June 1921, section 9c, Jonction Nord-Midi - Interpellation de M. Catteau. ['It is unacceptable, indeed, that the capital continues to present, everywhere one looks, the spectacle of districts in ruins, vacant plots of land and abandoned building sites.']
- 10 An overview of these works can be found in T. Demey and P. Legrain, *Bruxelles. Chronique d'une capitale en chantier*, Brussels 1990.
- 11 G. Abeels et al., *Straten en stenen*, Brussels 1982; T. Demey and P. Legrain, 'Une capitale face aux défis de l'ère industrielle', in: *Bruxelles. Chronique d'une capitale en chantier* vol. 1, Brussels 1990, 7-37.
- 12 In the period 1860-1940 several successive versions of the building code were in force; the code of 14 February 1857, 8 January 1883, 2 April 1906 and 25 August 1936. SAB, Gemeentebblad 1857, 1883, 1906 and 1936, Règlement sur les bâtisses.
- 13 This article draws on some one hundred special specifications for demolition works during the period between 1864 and 1922. SAB, Actes Administratifs (1860-1937).
- 14 In the period 1860-1940 various successive versions of the general specifications were in force: the specifications of 1855, 1884, 1911 and 1930. SAB, Actes Administratifs (1860-1937); SAB, Gemeentebblad 1884, council meeting of 23 June 1884, vol. 8, Cahier des charges général des travaux pour compte de la Ville.
- 15 SAB, Publieke Werken, 352-388, Maisons à charge de démolition (1864-1907).
- 16 SAB, Actes Administratifs, 7060 (1908); SAB, Actes Administratifs, 7473 (1909); SAB, Actes Administratifs 7833 (1910); SAB, Publieke Werken, Maisons à charge de démolition, 364, rue Notre-Dame-de-Sommeil (1880); SAB, Publieke Werken, Maisons à charge de démolition, 369, rue Auguste Orts et rue des Poissonniers (1885); SAB, Publieke Werken, Maisons à charge de démolition, 370, rue Plattestein (1886); SAB, Publieke Werken, Maisons à charge de démolition, 371, rue des Choux (1888); SAB, Publieke Werken, Maisons à charge de démolition, 371, rue Marché au Charbon et rue Plattestein (1888); SAB, Publieke Werken, Maisons à charge de démolition, 371, rue des Riches Claires et rue de la Grande Ile (1888).
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- 20 Meyfroots 2001 (note 7).
- 21 SAB, Publieke Werken, ARCH 808, Liste des objets anciens de maisons démolies.
- 22 This approach was not confined to Brussels; various European heritage organizations launched similar initiatives. One striking example was the reconstruction of entire gable ends from the seventeenth and eighteenth century in Amsterdam in the 1930s, under the supervision of the building inspector Eelke van Houten. See W. Schoonenberg, 'De Van Houtenmonumenten. Een reconstructie van de werkwijze van Eelke van Houten (1872-1970)', *Bulletin KNOB* 111 (2012) 4, 221-31; V. van Rossem, 'Moderne architectuur in de schaduw van het modernisme', *Bulletin KNOB* 107 (2008) 4, 138-146.
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- 24 C. Houbart, 'De(con)struction-(re)construction. Urban scenography in Belgium in the 1960s', *Gremium* 11 (2019) 6, 46-61; ICOMOS, Athens Charter 1931; ICOMOS, Venice Charter 1964.
- 25 J. Richarz, *Aachen - Wiederaufbau: Rekonstruktion durch Translozierung*, Aken 2020; L. Reyniers, S. Van de Voorde, and I. Wouters, 'Capturing the practice of deconstruction in Brussels (1903-1939). Photographic heritage collections as a starting point for construction history', in: J. Campell et al. (eds.), *Timber and construction*, Cambridge 2022, 387-96.
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- 29 Although demolition materials from the first category were not part of the agreement, not all materials of artistic or symbolic value were claimed by the city. Of interest here is the research conducted by Manuel Charpy into the fondness for the past expressed through historical objects in nineteenth-century Parisian bourgeois culture. In response to Haussmann's sweeping renovation of the city, members of the bourgeoisie started to furnish their new apartments with historical ornaments, such as old fireplaces and stairs, placing historical symbolic value above practicality. It is likely that a similar penchant for the past developed among private individuals in Brussels. M. Charpy, 'L'ordre des choses. Sur quelques traits de la culture matérielle bourgeoise parisienne, 1830-1914', *Revue d'histoire du XIXe siècle* 34 (2007), 105-128.
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- de démolition, 374, rue des Poissonniers (1890).
- 32 SAB, Publieke Werken, Maisons à charge de démolition, 367, impasse du Réveil (1883).
- 33 SAB, Publieke Werken, 352-388, Maisons à charge de démolition (1864-1907).
- 34 SAB, Publieke Werken, Maisons à charge de démolition, 367, place du Jeu de Balle (1883).
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FROM ART OBJECT TO RUBBLE

MUNICIPAL POLICY ON DEMOLITION MATERIALS IN BRUSSELS (1860-1940)

LARA REYNIERS, STEPHANIE VAN DE VOORDE AND INE WOUTERS

This article investigates the impact of the valuation of demolition materials on its ultimate destination in the city of Brussels between 1860 and 1940 via an analysis of municipal policy on demolition. It examines the process of revaluation and devaluation in buildings, shifting the focus from large-scale urban developments to individual elements and materials. The study entails an analysis of the rules embedded in the building regulations and specifications for demolition projects, as well as records, reports and correspondence illustrating the enforcement of these rules. A brief outline of the legal and administrative framework is followed by a discussion of the criteria used in categorizing and evaluating demolition materials.

In the period under consideration the Brussels city council, in common with many European municipal governments, embraced large-scale demolition operations as a radical solution to the challenges facing city centres. The stable policy during the period 1860-1940 exhibited various valuation processes across comparable demolition projects. The Brussels authorities pursued a stratified policy, integrating the different categories of demolition materials according to their nature and value. These categories comprised (1) treasures, artworks, objects related to numismatics and natural history, and all other objects of any value, (2) materials and objects, and (3) rubble, soil and waste.

The city prioritized artworks and objects of artistic or

historical value, over which it retained ownership, and invested in the preservation, exhibition and reuse of such materials. Other demolition materials were sold to the demolition contractors, meaning that the city government had little direct influence over their ultimate destination. Nevertheless, the building inspector estimated the financial value of the various materials and objects prior to organizing a public sale of these materials. The limited interest in rubble and waste evident in the administrative documents did not necessarily point to an absence of policy, but rather to the relation between various categories of demolition materials. By drawing attention to their financial value, the public sale of such materials not only generated financial returns for the city, but also indirectly influenced the reuse of these materials and so also the proportion of rubble and building waste.

As such, the study serves to clarify the dynamics between revaluation and devaluation of demolition materials. This new perspective on demolition materials illustrates their role in policymaking with respect to large-scale urban transformation projects. It contributes to a broader understanding of the importance of the reuse of demolition materials in the period between 1860 and 1940, and sheds light on the relation between urban development, heritage preservation, reuse and waste management.