



Water, Doors and Buildings

Studies in the History of Construction

**The Proceedings of the Sixth Conference of the
Construction History Society**

**Queens' College
Cambridge
5-7 April 2019**

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The stonecutters' workshop on the restoration worksite of the Collegiate Church of the Holy Cross in Liège (1845-1859)

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Introduction

Founded at the end of the 10th century, the Collegiate Church of the Holy Cross is located to the North-West of the medieval city of Liège, on the western side of a small hill called "Publémont", between the Collegiate Church of St Martin and the former Cathedral of Notre Dame and St Lambert. The existing church, essentially gothic, is the result of various work campaigns conducted between the first half of the 13th century and the end of the 15th century. Particularly appreciated in the 19th century for its history and architectural forms, it was considered by the first Belgian administrations to be one of the major historical monuments in the country giving it a reputation as the "diamond of the country" [1]. As such, it was the subject of an important restoration campaign between 1845 and 1879 which involved the contributions of two successive architects, Jean-Charles Delsaux (1845-1858) and Eugène Halkin (1858-1879) [2].

Even though the general history of this restoration has been thoroughly documented in a recent thesis devoted to the medieval building [3], it is worth noting that no elaborate study has yet been devoted to the logistical, material, technical, economic or human aspects of these operations, despite the abundance of documentation linked to this significant episode in the existence of the church. In fact, the church council has an exceptionally well-preserved archive group containing almost all the detailed accounts of works carried out on the building between 1830 and 1914. Receipts and invoices for materials delivered and payments made, statements of accounts bearing the names, salaries and working hours of workers, technical and administrative correspondence or iconographic documents, are all excellent sources of information that document the progress of this major building restoration project in Belgium in the 19th century. However, this critical mass of archives imposes a choice on the researcher as collecting, managing and interpreting the data is both time-consuming and complex to convey in a short publication, without losing some of its essential substance. In addition, the present article focuses on a precise subject, generally overlooked in the literature due to a lack of documentary evidence : the functioning of the stonecutters' workshop from the beginning of the project in May 1845 up to the completion of the northern porch in 1859 [4].

General chronology of the project

During whitewashing work in 1840, the contemporary occupants were amazed by the discovery of medieval mural paintings, and this drew the attention of the Belgian authorities to the conservation problems posed by the monument. The extent to which the church had become dilapidated was such that an important restoration campaign was planned and initiated five years later. Entrusted to the provincial architect Jean-Charles Delsaux, operations focussed principally on the *Westbau* up to the year 1852, the initial appearance of which was largely preserved despite undergoing very heavy physical work, as some restorations were more like reconstructions in nature (fig. 1 and 2). In parallel with this, consolidation work and modifications – notably to the windows and their traceries – were carried out on the choir and the transept in the periods around 1847-1848 and 1851-1852.

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The external southern façade and the two first internal spans of the nave were restored in 1854-1855; a phase during which gables were fitted above the side chapels. Finally, a new porch was fitted to the north of the Westbau in 1858-1859 by the architect Eugène Halkin, who succeeded Jean-Charles Delsaux following a disagreement between Delsaux and the church council [5].

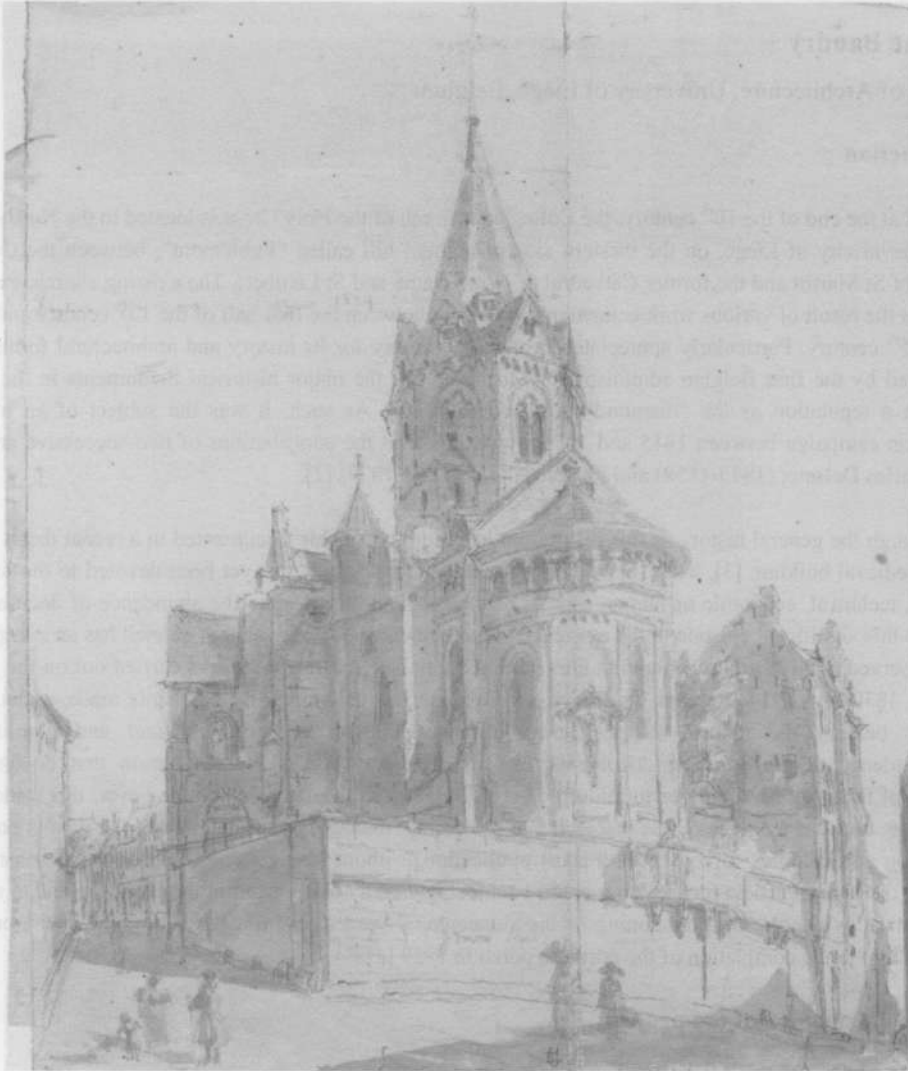


Figure 1. Watercolour drawing of the Westbau in 1834, before restoration. © University of Liège – Musée Wittert.



Figure 2. Photograph of the Westbau during the First World War. © KIK-IRPA, Brussels.

The choice of stones

The stones used in medieval churches differ in terms of their construction origins and the role assigned to them in primitive construction – structural, ornamental, visible or concealed masonry, etc. The main type of stone

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used was carboniferous limestone extracted in the Meuse valley, local coal sandstone, freestone from Maastricht, bajocian limestone from the French Ardennes, and, to a lesser degree, carboniferous limestone from Tournai, travertine and German *Bundsandsteine* [6]. The restorers substituted this complex and primitive mix, which has today been well-established by means of petrographic analyses, with three types of stone, and they did so in accordance with their knowledge of the original materials, techno-economic considerations and the available market. Therefore, a carboniferous limestone from the Ourthe valley, the "small granit", replaced the limestones of the Meuse and Tournai. A decalcified sandstone from the same valley, called "oatstone", replaced the traditional coal sandstone from Liège. Finally, freestone from Maastricht, called "sandstone" (in French: *Pierre de sable*), was substituted for the original travertine, freestone and bajocian limestones [7]. These materials with heterogenous properties – sandstone can be chiselled and easily sawed unlike the *small granit* which has great durable qualities – were worked on intensively and delivered regularly, from 1845 to 1859, by 17 suppliers (table 1) [8].

Table 1. General view of stones supplies from 1845 to 1859.

Supplier	Qualification	Location	Type of stone	Activity
Mathieu Franck	Contractor	Ourthe river	Small granit	1845, 1847
François Baatard	Master quarryman	Florzée (Sprimont)	Small granit	1846-1851
J. L. Burton-Sior	Master quarryman	Poulseur (Comblain-au-Pont)	Small granit	1851, 1852, 1854
François Dehan	Master quarryman	Comblain-au-Pont	Small granit	1858
H. Lejean	Contractor	Verviers [9]	Small granit	1855
A. J. Dekkers	Door constructor	Sibbe (Fauquemont-sur-Gueule)	Sandstone	1845-1847
Bosch	Unknown	Unknown	Sandstone	1846
Antoine Lenaerts	"Sand merchant"	Sussen (Maestricht)	Sandstone	1847-1849, 1855, 1858
Henri Box	"Sand merchant"	Sussen (Maestricht)	Sandstone	1848
P. Bamps	"Sand merchant"	Sussen (Maestricht)	Sandstone	1849-1854
Riggardus Reggers	Unknown	Unknown	Sandstone	1850
F. Lhonneux	Unknown	Unknown	Sandstone	1851
A. & G. Closon frères	Unknown	Hornay (Sprimont)	Oatstone	1845
Renard frères	Unknown	Unknown	Oatstone	1845
Barthélemy Joseph Notet	Unknown	Unknown	Oatstone	1846
Henri Thiernesse	Unknown	Lincé (Sprimont)	Oatstone	1851
Jean-François Dufaÿs	Master quarryman	Lincé (Sprimont)	Oatstone	1858

The creation and location of the workshop

Although the archives of the restoration of the church are particularly rich and abundant, no document mentions the physical creation of a workshop on the site, except for a letter from 1844 which rhetorically states, while also mentioning the collective nature of the work to come, that a “*workshop of experienced workers needs to be created*” [10]. The existence of a physical location where stonecutters worked together is in little doubt, even if the form of this place remains undetermined – individual cabins, communal hut or appropriate area of the church or cloister [11]. The omnipresence and high number of stonecutters on the site throughout the year (cf. *infra*) would indeed suggest that a big enough space was created in order to receive materials and labour, but which was also limited in size so that it could be heated during the harsh season. All things considered, this space was probably attached to the north of the eastern parts of the church because the specifications of the time stipulate that the stones must be delivered to “*the terrace against the church and at the foot of the tower*” [12], thus minimising the amount of handling required for these heavy materials (fig. 3).

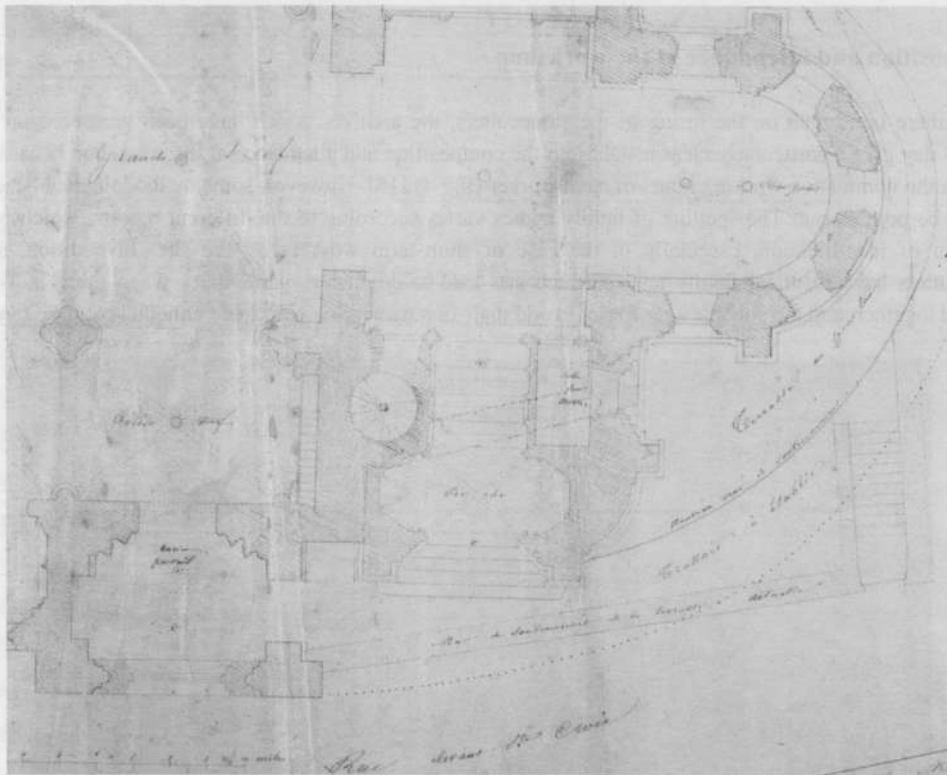


Figure 3. Plan of the terrace where the stonecutters' workshop was probably located. © Church council.

The choice of workshop manager

On the restoration site, the head of the stonecutters' workshop and the works coordinator were one and the same person: the individual in question was Hubert Joseph Plomteux, a master stonecutter from Lavoisier which was a village of the Hesbaye region situated some twenty kilometres to the West of Liège and a large part of

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whose population was involved in stone-related work [13]. He met with the members of the church council some months before the opening of the restoration site, in January 1845, by some unknown process – word of mouth, professional network, etc. This meeting took the form of a job interview and when it was over, the worker in question stated that he was “ready to go when you give the order” [14], as the restoration project undoubtedly represented the possibility of guaranteed work during a period of economic hardship [15]. The following months were probably used by the worker to recruit a reliable team of experienced stonecutters who were available for work in the short to long term, which tends to confirm the permanent composition of the workshop during the first two years of the project (cf. *infra*). Given the significant distance between Liège and Lavoir and the daily presence of the works manager on the site, Hubert Joseph Plomteux obviously had a *pied-à-terre* in the Liège area, especially since he worked on this site until 1868 [16]. In addition to the supervision and daily management of men and operations, he organised several visits to the quarries of the region and evaluated the quality of stone he needed for his team [17].

Composition and attendance at the workshop

While there is no data on the hiring of the stonecutters, the archives which have been preserved up to the present day give a particularly clear insight into the composition and attendance at the workshop because they contain the nominative working hours of each worker (fig. 4) [18]. However, some methodological headaches should be pointed out. The spelling of family names varies according to the different reports, which poses a problem of identification, especially in the case of short-term workers on the site. In addition, several stonecutters have identical family names which can lead to confusion, particularly when these individuals worked together, and the site manager forgot to add their first name. Such cases are nonetheless quite rare.

EXERCICE 1848
FABRIQUE de l'Église St^e Croix.

ÉTAT DES JOURNÉES EMPLOYÉES PAR LES OUVRIERS
aux grosses réparations de l'Église Ste. Croix à Liège.

Quinzaine du 27 au 9

N ^o des OUVRIERS.	NOMS des OUVRIERS.	QUALITÉ des OUVRIERS.	DÉSIGNATION DES JOURNÉES.														TOTAL des heures de la 15 ^{es} .	PRIX de la JOURNÉE.	TOTAL de la QUINZAINE.
			L.	M.	M.	J.	V.	S.	D.	L.	M.	M.	J.	V.	S.				
1	Alphonse	à															14	3	42
2	Auguste		1	1	1	1	1										11	2 50	27 50
3	Barbier		1	1	1	1	1										12	2 50	30
4	Buymont		1	1	1	1	1										10 1/2	2 50	27 00
5	Gillier		1	1	1	1	1										14	2 50	30
6	Hubert		1	1	1	1	1										11 1/2	2 50	29
7	Cie framaye																1	2 50	2 50
8																			

Figure 4. Daily reports of the stonecutters, August-September 1848. © Author (source : archives of the church council).

Between 1845 and 1859, 44 stonecutters, including Hubert Joseph Plomteux, succeeded each other on the site (table 2). Some of these stonecutters only worked for a few days or weeks before disappearing from the accounts (perhaps following an unsuccessful test), while others were more established, working for several months or, in rare cases, for several years. Therefore 14 workers worked for less than one month, 13 workers worked for between one month and one year, seven workers worked for between one and two years and only nine workers worked for more than two years. The record number of days for a worker on the project was held by Pierre Lejeune who was active on the site from September 16th, 1845 until May 13th, 1852. He was present on the site for 1725 days and absent for 281 days in total (table 3) [19].

Table 2. List of stonecutters who worked on the restoration site.

Name	First name	First appearance	Last appearance
Delcominette	Alexandre	May 19, 1845	September 6, 1845
Smal	Joseph	May 23, 1845	December 24, 1846
Piron	Joseph	May 26, 1845	August 14, 1846
Devigna	L.	May 30, 1845	June 14, 1845
Dager	Pierre	June 16, 1845	June 28, 1847
Florkin	Théodore	June 30, 1845	March 20, 1847
Gillard	C.	July 15, 1845	July 28, 1849
Lejeune	Pierre	September 16, 1845	May 13, 1852
Halleux	H.	July 20, 1846,	February 13, 1847
Leclerc	Nicolas	August 3, 1846	May 10, 1851
Delhalle	B.	August 17, 1846	August 7, 1847
Bernârd	C.	August 31, 1846	September 12, 1846
Bernard	D.	October 26, 1846	November 7, 1846
Dumont	J.	May 7, 1848	June 30, 1849
Barbier	Ferdinand	July 19, 1848	February 9, 1853
Boka	L.	May 30, 1849	July 21, 1849
Plomteux	Clément	July 30, 1849	November 3, 1855
Barbier	J.	December 10, 1849	April 13, 1850
Ferard	Jean	January 14, 1850	October 21, 1850
Henquet	A.	April 22, 1850	May 10, 1851
Plomteux	Hubert	May 4, 1850	December 27, 1854
Dechamps	J.	June 4, 1850	June 15, 1850
Henquet	F.	May 22, 1850	June 15, 1850
Dechamps	Auguste	June 17, 1850	April 25, 1855
Materne	A.	July 1, 1850	May 14, 1851
Hankar	A.	August 19, 1850	December 23, 1850

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Name	First name	First appearance	Last appearance
Balas	J.	May 19, 1851	August 23, 1851
Lebrun	Evard	October 10, 1851	October 31, 1851
Lebrun	Ch.	October 20, 1851	December 6, 1851
Dony	A.	November 4, 1851	December 24, 1851
Barbier	A.	December 1, 1851	December 31, 1851
Sotiau	F.	October 4, 1852	May 7, 1857
Raufin	Unknown	December 3, 1852	December 7, 1852
Sotiau	Alfred	July 24, 1854	July 14, 1857
Lecler	Hubert	August 24, 1854	September 9, 1854
Reumont	J. ou D.	September 14, 1854	September 27, 1854
Parmentier	François	November 13, 1854	November 30, 1854
Evard	J.	November 13, 1854	December 1, 1854
Chatorier	Ct.	November 20, 1854	November 23, 1854
Plomteux	Théodore	May 3, 1858	November 29, 1859
Pilet	Auguste	May 21, 1858	May 26, 1858
Colson	Louis	June 16, 1858	March 2, 1859
Soyez	Emile	April 4, 1859	May 7, 1859

Table 3. General view of Pierre Lejeune's work from 1845 to 1852.

Years	Working days	Days worked	Days absent	Full-time equivalent	Annual payment
1845	90	79	11	77 et 1/8	154,99 francs
1846	306	259	47	254 et 1/4	537,74 francs
1847	277	237	40	228 et 1/2	504,75 francs
1848	306	233	73	230 et 3/4	493,37 francs
1849	306	250	49	245 et 3/4	548 francs
1850	306	286	20	281	597,87 francs
1851	306	280	26	276 et 1/4	574,12 francs
1852	116	101	15	98 et 3/4	197,49 francs

The stonecutters working on the site for several years were the backbone of the workshop due to their experience, their knowledge of the site and the materials they worked with. They were a valuable help to the master stonecutter who often had to abandon his stonecutting tasks to discharge his duties as works manager. Their presence was essential in order to guarantee continued high-quality work, but also to train, mentor or supervise the new arrivals, most of whom were only employed for short periods, probably in order to satisfy

the requirements of the site (cf. *infra*). During the first two years, this role was filled by Joseph Smal, Joseph Piron, Pierre Dager, Théodore Florkin and Pierre Lejeune. It was then filled by the same Pierre Lejeune (September 1845 – May 1852), Nicolas Leclerc (August 1846 – May 1851, with long interruptions), Ferdinand Barbier (July 1848 – February 1853), Clément and Hubert Plomteux (respectively July 1849 – November 1855 and May 1850 – December 1854), Auguste Dechamps (June 1850 – April 1855), Ferdinand and Alfred Sotiau (respectively October 1852 – May 1857 and July 1854 – July 1857, with long interruptions) and, finally, Théodore Plomteux (hired from May 1858).

It is interesting to note that this core of workers essentially involved family members of the works manager Hubert Joseph Plomteux and qualified workers such as Ferdinand Barbier, a master stonemason whose experience had already been tested on the restoration site of the Saint-Martin church from April 1844 to March 1847 [20]. It should also be added that while Pierre Lejeune has a quite common name, he may be from the same family as Antoine Joseph Lejeune, manager of a quarry in Lillé (commune of Sprimont), who unsuccessfully applied for the *small granit* and *oatstone* public tenders [21]. Perhaps the fact that he was hired shows that the works manager wanted to hire workers who were accustomed to working on these materials, but also, wanted to maintain good relations with other families working in the same professional sphere, thus guaranteeing the economic vitality of this group while at the same time hoping for a reciprocal gesture should the situation arise. To this extent, it should be noted that contractors and master quarrymen acted often as referees for each other when they answered a public tender in this region during the 19th century [22]. Complementary research into the population-surveys of the city of Liège will help to more clearly define the social profile of this workforce and the familial and professional relations between its members [23].

Most of the workers hired for a short period were not absent from the site and worked there on a full-time basis, which reinforces the idea that these individuals were hired to meet the labour requirements of the site before disappearing off the radar. It was indeed rare for a worker who served for a few weeks or months to be rehired, probably because the difficult economic situation of the country led this workforce to seek work where they could get it and they were therefore no longer available to be rehired subsequently. The urgent nature of the periodic hiring of workers would depend more on their availability than on their technical ability, even though the latter was essential element for performing the required tasks.

Lastly, it should be clarified that there is no data confirming whether certain individuals were specialised in a specific type of material or work – fine sculpting or ordinary masonry – which could only have had an adverse effect as this criterion is essential to understanding the composition of teams and the distribution of the work. Delicate and artistic pieces such as pinnacles, flowerets, cornices, consoles, columns, mouldings or even gargoyles, were paid by the piece and entrusted to a workforce that remained anonymous [24]. A careful study of the monument might make it possible to refine this question, in tandem with the archival data, although serious doubts arise concerning this possibility, as the work on the blocks of stone was defined by very precise specifications from which it would have been dangerous to allow any individual deviation.

The periods 1845-1846 and 1850-1852 feature among the most intense in terms of the labour force employed on the site. The first corresponds with the launching of the restoration project and the almost total reconstruction of the octagonal tower; the second corresponds to the completion of the *Westbau* and the beginning of work on the choir and the transept. During these years, the general tendency was to employ between 5 to 8 stonemasons daily, except in 1850 when the daily attendance of workers varied between 6 to 11 stonemasons

(table

4).

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Table 4. Daily attendance of stonecutters during the year 1850.

Week	Mon.	Tue.	Wed	Thu.	Fri.	Sat.	Sun.
December 31		Holiday	5	5	5	5	Holiday
January 7	5	5	5	5	5	5	Holiday
January 14	6	6	6	6	6	6	Holiday
January 21	6	6	5	5	6	6	Holiday
January 28	6	6	6	7	7	7	Holiday
February 4	6	6	7	7	6	6	Holiday
February 11	7	7	7	7	7	7	Holiday
February 18	7	7	7	7	7	7	Holiday
February 25	6	7	7	7	6	6	Holiday
March 4	6	6	6	6	6	6	Holiday
March 11	7	5	6	6	6	5	Holiday
March 18	6	6	6	6	7	7	Holiday
March 25	5	7	7	7	7	6	Holiday
April 1	Holiday	6	7	7	6	6	Holiday
April 8	6	4	6	6	6	7	Holiday
April 15	6	6	6	6	6	6	Holiday
April 22	5	6	6	5	6	6	Holiday
April 29	5	6	6	6	6	7	Holiday
May 6	8	8	8	Holiday	8	8	Holiday
May 13	8	8	7	7	6	7	Holiday
May 20	Holiday	3	6	7	7	7	Holiday
May 27	7	7	7	8	8	8	Holiday
June 3	8	9	9	8	8	8	Holiday
June 10	9	8	8	8	9	9	Holiday
June 17	8	8	9	9	9	9	Holiday
June 24	9	9	8	8	8	8	Holiday
July 1	7	8	8	7	7	7	Holiday
July 8	8	8	8	8	8	8	Holiday
July 15	8	8	7	7	7	7	Holiday
July 22	8	10	10	10	10	10	Holiday
July 29	10	10	9	10	9	10	Holiday

Week	Mon.	Tue.	Wed	Thu.	Fri.	Sat.	Sun.
August 5	10	10	10	10	10	10	Holiday
August 12	10	8	9	2	7	6	Holiday
August 19	10	10	11	11	11	11	Holiday
August 26	10	10	10	11	11	11	Holiday
September 2	10	11	11	10	10	10	Holiday
September 9	8	9	9	10	10	10	Holiday
September 16	9	9	9	10	11	10	Holiday
September 23	9	9	9	9	9	9	Holiday
September 30	10	10	11	10	11	10	Holiday
October 7	10	10	10	10	10	10	Holiday
October 14	9	9	9	9	9	9	Holiday
October 21	11	9	8	8	8	8	2
October 28	9	9	9	9	Holiday	9	Holiday
November 4	5	4	6	7	5	6	Holiday
November 11	7	7	7	8	8	8	Holiday
November 18	8	8	8	8	8	8	Holiday
November 25	8	8	8	8	8	8	Holiday
December 2	9	9	9	9	9	9	Holiday
December 9	6	8	8	8	8	8	Holiday
December 16	8	9	9	9	9	9	Holiday
December 23	9	5	Holiday	Holiday	2	3	Holiday
December 30	1	2					

Analysis of the working hours also makes it possible to affirm that, in a somewhat counter-intuitive way, the winter season did not necessarily coincide with a major reduction in the workforce. In most cases, the workshop was very active, often with a slight decrease when compared with the busy season which can be explained by the loss of one or two stonecutters on average – sometimes three, if the work teams were large to begin with. Sometimes, however, the activity was surprisingly more intensive during rigorous times than during the busy season, as in the winters of 1850-1854, the exceptional character of which has already been highlighted. As consequent works were planned for each spring during those years, it was not unusual for the workshop labour force to be increased by a few extra workers to prepare the stones, a practice that could be observed on other restoration sites such as the Collegiate Church of Saint Martin a few hundred metres away [25].

Working hours and salaries

When employed on a site, a stonecutter supplied his services six days a week, from Monday to Saturday with the exception of some public holidays spread throughout the year when the entire workforce had a day off – Easter Monday and Whitsun Monday, Ascension Thursday, the Assumption, All Saints Day, Christmas day Saint Stephen's day, and finally, the 28th or 29th of February of leap years [26]. An extra day off was often given to make a long weekend between a public holiday and the following or previous Sunday. A full year therefore generally consisted of between 306 and 313 working days. The worker worked for one-eighth of a day in accordance with the needs of the job, from a quarter of a day to a day and a half – the latter case may be bearing testimony to an accident risk premium for dangerous work on scaffolding. No document provides any evidence of breaks in the working day or the duration of a standard working day, which was calculated based on the solar day (cf. *infra*). By way of comparison, the archives of the restoration of Saint-Hubert Abbey Church covering the period 1844-1849 suggest that the working day typically varied from 10 to 12 hours [27].

Following the example of the other trades present on the site, the stonecutters were paid by day, in proportion to the time worked, and their balance paid every fortnight after joint verification of the accounts by the works manager and the receiver of the church council. If payment to the masons was different given that remuneration depended on their level of qualification – apprentice, mason, experienced mason etc. –, all the stonecutters were paid the same amount of money except for Hubert Joseph Plomteux, whose salary was higher due to his status as works manager.

Since the working time was largely dependent on the length of the solar day, the daily salary fluctuated several times during the year (Fig. 5). From 1845 to 1855, the daily salary was 1.75 francs during the winter period (from the beginning/middle of November to mid-February/beginning of March), 2.5 francs during the warm season (the end of March/beginning of April to the end of September/mid-October) and 2 francs during the two intermediate seasons. From October 1851, a fourth payment rate of 2.25 francs was introduced for the periods of October and the end of February/beginning of March. This development is difficult to understand for the four last years covered by the present article, a period during which the activity of the workshop was seriously reduced, to the point of not having a single worker apart from Hubert Joseph Plomteux. Nonetheless, the archives reveal that from 1855, only two major rates of 2 and 2.5 francs existed, with an occasional increase to 2.25 francs around March/April – the data was not continued for the Autumn. A slight increase was applied again in March 1859 (2.2, 2.48 and 2.75 francs), which a more detailed study of the second phase of the renovation project will provide more information on.

During the first four years, the payment to the works manager of the workshop followed the same trajectory as that of the workers, but with a more advantageous rate (2.25, 2.5 and 3 francs). From May 1849, these rates increased significantly (2.75, 3 and 3.5 francs), were consistent for two cycles in 1850 (3 and 3.5 francs) before stabilising at 3.5 francs in April 1851.

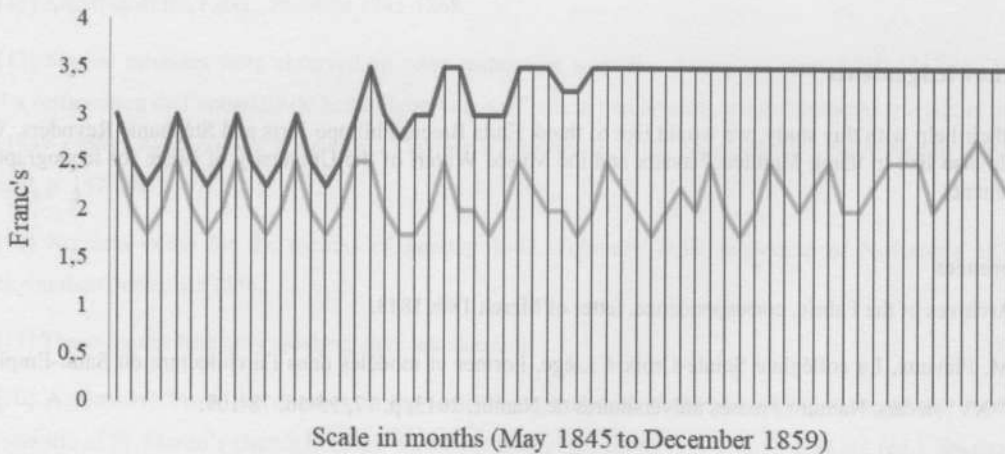


Figure 5. Comparison of evolution of salaries from May 1845 to December 1859 (grey line : stonecutters ; black line : works manager).

It should be noted that the stonecutters were the best paid of all the various trades on the site – masons, carpenters, tilers – except for the sculptors and, as mentioned above, the works manager. This characteristic was to be observed on the other contemporary sites where such data is available, even though the rate of payment differed as it was negotiated on a case by case basis [28].

Conclusions and perspectives

The archives of the Collegiate Church of the Holy Cross in Liège constitute an exceptional source for understanding in detail the functioning and the human, logistical, material, technical and economic aspects of a big restoration project in Belgium in the 19th century. The approach taken here is merely a first approach and will, it is hoped, become more systematized during the coming years to include other trades and materials, by creating a dialogue with the material remains, for the benefit of a building-archaeology campaign made possible by the imminent complete restoration of the monument.

On the downside, this data, and in particular the data relative to the workforce, cannot be separated from what is a strictly monographic framework and therefore suffers today from a severe lack of context. The main reason for a lack of comparison is because Belgian historiography has paid little attention to these subjects. It must be said that the lack of available documentation does not help as such archives are rarely preserved due to the fact that the church councils prefer a minimalist approach to general accounting as opposed to much more substantial and detailed account-keeping. Therefore, of all the restoration projects conducted in Liège in the 19th century, only this restoration seems to be documented in detail with regard to the above-mentioned factors, and this is in spite of particularly rich funds for the Collegiate Church of St Martin and the Palace of the Prince-Bishops. It is hoped that future examinations on a Belgium-wide scale can resolve this peculiarity [29].

Acknowledgements

For their help with this study, we would like to thank Enda Breen, Philippe Joris and Stéphanie Reynders. We would also like to thank Mathieu Piavaux and the Musée Wittert of the University of Liège for iconographic documents.

References

- [1] Archives of the Fabric, correspondence, letter of March 18th 1848.
- [2] M. Piavaux, *La collégiale Sainte-Croix à Liège. Formes et modèles dans l'architecture du Saint-Empire. XIII^e-XV^e siècles*, Namur : Presses universitaires de Namur, 2013, p. 17, 55-56, 78-109.
- [3] *Ibid.*
- [4] The shortcomings of these archives are progressively mentioned throughout the text. For a first approach to these workshops, see A. Timbert, *Viollet-le-Duc et Pierrefonds. Histoire d'un chantier*, Villeneuve d'Ascq : Presses universitaires du Septentrion, 2017, p. 149-154 (Documents et témoignages, 1749). On the site of the Collegiate Church of the Holy Cross in Liège, stonecutters are hired to cut stones. Another team of stone masons, which is not analysed in the present article, is also hired for masonry works.
- [5] M. Piavaux, *op. cit.*, p. 78-101.
- [6] *Ibid.*, p. 195-199.
- [7] *Bundsandsteine* were not impacted by the restoration.
- [8] Archives of the Fabric, invoices 1845-1859. The ornamental stones for tiles, chimneys, etc., are not mentioned in this list.
- [9] Probably the location of the contractor and not the origin of the stone.
- [10] Archives of the *Commission royale des Monuments, Sites et Fouilles*, file Liège 1.11, letter of August 22nd 1844.
- [11] See the example of the Castle of Pierrefonds (A. Timbert, *op. cit.*, p. 149-154).
- [12] *Archives de l'État à Liège*, Cures, Sainte-Croix, file 5, specification of February 3rd 1845.
- [13] See Popp plan, Lavoir, n°119.
- [14] Archives of the Fabric, Correspondence, letter of April 13th 1845.
- [15] On the general economic situation of the country during the 1840s, see E. Witte, *Nouvelle histoire de Belgique. 1828-1847. La construction de la Belgique*, Bruxelles : Le Cri Edition, 2018, p. 139-161.

- [16] Archives of the Fabric, invoices 1845-1868.
- [17] Similar missions were observed on other restoration worksites during the years 1840-1860 (A. Baudry, 'La restauration de l'abbatiale de Saint-Hubert au XIX^e siècle : architectes, conducteurs des travaux et ouvriers (1839-1884)', *Saint-Hubert d'Ardenne. Cahiers d'Histoire*, t. XIII, Saint-Hubert : Saint-Hubert d'Ardenne asbl, p. 147-149.
- [18] No data exists for the months of January 1847, February 1848, beginning of November 1853 and November-December 1856.
- [19] These figures take only working days into account.
- [20] A. Baudry, 'From the drawing to the wall: the operational chain of building stone on the restoration worksite of St. Martin's church in Liège during the nineteenth century', J. Campbell *et. Al.* (éd.), *Studies in the History of Services and Construction. The Proceedings of the Fifth Conference of the Construction History Society*, Cambridge, Queen's College, 06/04/2018-08/04/2018, Cambridge, 2018, p. 421. This worker no longer appears in the accounts of the Saint-Martin church after March 7th, 1846 (Archives of the Fabric of St Martin church, file II.A.14).
- [21] He also applied for the St Martin church contract in 1843 without success (A. Baudry, 'From the drawing to the wall...', *op. cit.*, p. 416.
- [22] Archives of the Fabric, tenders of February 14th 1845.
- [23] These archives were not available during this study.
- [24] Sizeable sums then came into play. Thus in 1855, each pinnacle was priced at 190 francs per piece, or the equivalent of 76 days at 2.5 francs or, put more bluntly, around a third of the annual revenue of the stonemason Pierre Lejeune.
- [25] A. Baudry, 'From the drawing to the wall...', p. 421.
- [26] Sometimes, the 31st of December and the 1st of January were given as holidays, even though this practice was less common. Working during a public holiday was somewhat rare.
- [27] A. Baudry, 'La restauration de l'abbatiale de Saint-Hubert...', *op. cit.*, p. 151.
- [28] *Idem.*
- [29] Such archives exist for the Collegiate Church of St Waudru in Mons which, undoubtedly geographically distant from Liège, offered relevant points of comparison (*Archives de l'État à Mons*, Cures, Sainte-Waudru, file 265 and following).