Giving a future to a part of Roman Maastricht: the Hotel Derlon museum cellar
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Introduction

In the 1990s, Maastricht represented the Netherlands in an European network of cities, which declared themselves to be the most ancient town in their own country. It was on the initiative of the Greek city of Argos that this network of ‘Most Ancient European Towns’ (MAETN) saw light in 1994. The MAETN network included a program called ‘CARE’, which focused on the development of ancient sites. During a workshop in Maastricht on the preservation of ancient walls on Thursday 10 December 1998, the author of this article reported on the philosophy of the conservation of the Roman remains which had been realized in the Museum Cellar under Hotel Derlon in Maastricht in the early 1980s.

The site at Hotel Derlon lies in the heart of Roman Maastricht, near the Square of Our Lady. The excavations of 1983 were carried out by the municipal archaeological service, following as normal the demolition of the old building and preceding the groundwork for the new one. They yielded an unique section through the city’s 2,000 years of residential history. The archaeological sequence had hardly been touched by medieval or modern constructions. Below the old Derlon, the excavators uncovered a six-meter stratigraphy, containing a cross-section of the city’s history from the first century BC to the fifteenth century AD. Furthermore, in the lowest three meters, impressive architectural remains from the first centuries of urban life were found. This was a rare chance to visualize the hidden past of the city in addition to the already important and splendid collection of archaeology in the Bonnefantenmuseum of Maastricht.

The highlights of the excavation at Hotel Derlon were:
1. A cobblestone road from the first century BC at a depth of 6 meters, perhaps the oldest paved road in the Netherlands;
2. The Roman road from Cologne to Tongeren on top of it;
3. The entrance and other parts of an enclosed Roman sanctuary from the second and third century AD at a depth of 4 metres;
4. In the centre of the sanctuary, an unique pillar for Jupiter with sculptured niches with the gods of the Roman pantheon, originally 10 meters high, was found in situ. The temple itself was thought to lie further to the south, under the cloister of the

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2. City Councils of Colchester, Maastricht and Tongeren [T. Bellens, C. Vandegehuchte (eds.)], Conservation & Accessibility of Roman Europe (CARE). Three Roman Temples: Colchester, Maastricht, Tongeren. A case study on reconstruction of ancient monuments based on archaeological research. Proceedings from the First year, 1997 (s. l. [Tongeren], s. d. [1998]).
Church of Our Lady, but was not discovered there during an excavation in 1996;  
5. The wall and west gate of the late-Roman fortress, which once included the entire Stokstraat quarter, at a depth of 3 meters;  
6. On top of all this, residential layers from the early Middle Ages, walls of houses from the 11th and 12th centuries, and finally the heavy foundations of St. Nicholas’ church from 1342.

The building plans for the new Hotel Derlon provided for cellars throughout the entire complex. However, in 1984, it was decided that the results of the unique foregoing excavation, which illuminated the growth and development of the early city in reference to the archaeological record, should be preserved and made accessible. This was made possible by the joint efforts of the national, provincial and local governments, the real estate developer, the hotelkeeper and the Maastricht Tourist Office. The plan and function of different parts of the new building had to be altered to produce what is now an unique contemporary underground museum, but also includes a self-contained work of art in the reception and dining room of Hotel Derlon.

Of course, the excitement generated during the excavations would never come back. A somewhat mystical and special atmosphere came instead, which has been produced by the contrast and harmony between the monumental stillness of the archaeological objects and the contemporary presentation (Figs. 10–13). The hotel management is in charge of the cellar museum, but free access is guaranteed on Sunday afternoons and during city tours organized by the local Tourist Information Office. The cellar museum can also be used for special receptions and parties. Sixty guests can be seated for meetings; for receptions and so on, numbers must be restricted to 125.

Course of events and decision-making
During the planning and designing process for the new Hotel Derlon, successive architects were given warnings about the Roman heritage in the subsoil
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The Hotel Derlon site during building activities in the winter of 1983–84. In the centre, the fortress wall has been protected by wooden boarding and plastic tarpaulin.

Fig. 3. The Hotel Derlon site during building activities in the winter of 1983–84. In the centre, the fortress wall has been protected by wooden boarding and plastic tarpaulin.

of the old building and advice to build in excavating time. Successive archaeologists especially pointed out the fact that an important section of the west wall of the late Roman fortress could be expected on this site. However, in the officially approved building plans, the possibility of archaeological finds was not considered, although a period of six months was fixed for archaeological research during the building schedule.

The demolition of the old hotel took place in the early months of 1983. The breaking-up of the foundations and cellars was designed to affect any remains as little as possible. In the event, some archaeological remains were disturbed, but it was possible to rescue some archaeological information even then. The excavation started in June 1983. By August the excavators had uncovered such a quantity of Roman walls, and made visible such an impressive stratigraphic profile that the location, situated in the heart of the city, was drawing national and international attention (Fig. 1). So the first discreet attempts started to change the building plans, in order to conserve this rediscovered Roman past of Maastricht and make it accessible to future generations. A decisive factor was the unexpected discovery of the sculptured base ‘in situ’ plus a number of sculptured stone blocks and fragments which belonged to an unique monumental votive pillar in honor of Jupiter and the Roman gods, dating from the middle of the second century AD (Fig. 2). This find made it quite clear that the excavation was investigating one of the central estates of the former Roman vicus.

At the end of August 1983, the excavators made an urgent appeal to the development company to take the recently discovered Jupiter pillar into consideration and change the building plans so that the pillar could be integrated into the basement of the hotel. Ongoing discoveries, which appealed to everyone’s imagination, such as a very old street paved with cobblestones in the deepest layers of the excavation and a well-preserved section of the fourth-century defensive wall and town gate, got into all the Dutch papers (Fig. 4). This publicity encouraged all those involved, including the authorities of all levels, to investigate very seriously the possibility of rescuing the whole site. As usual, money was the biggest problem, required both to finance the non-construction of 400 square meters of shops, and to finance the costs of conservation, restoration, presentation and the future exploitation of the archaeological site.
Half way through October, while the excavation was still continuing, the development company itself took the initiative to reposition the planned pile foundations, at their own account and risk, so as to keep them away from the Roman walls and monuments. This allowed an extra four months before the definitive decisions had to be made. This readjustment raised the costs by €32,000, but meant that the work of preparing the site for building could start as planned during the next winter. Meanwhile, the complete excavation was protected with filling it with sand and packaging the stone walls and monuments with an extra protection of wooden boarding (Fig. 3). Inconvenient components of the site such as the town gate, which stood in the way of the building activities, were dismantled and put into store for the time being (Fig. 4).

An important conference was held in the Town Hall of Maastricht on 9 December 1983 under the chairmanship of the municipal alderman for environmental planning and cultural heritage, with the participation of representatives of all the business communities involved in the Hotel Derlon project, and of all levels of government, the local tourist organization, a number of national officials of cultural heritage and the local director of archaeology. Allowing the basement to have a multifunctional purpose seemed to be the best solution to minimize the future exploitation expenses. So it was decided to make the tourist organization the owner of the archaeological site, but to transfer the economic ownership of the basement to the hotel for use as a dining room. The accessibility of the archaeological site was guaranteed by an agreement between the hotel and the local tourist organization as part of the council decree. Thus, the practical value of the basement for the hotel could guarantee the future maintenance and exploitation of the cellar museum and archaeological site. The financial share of the town in the project was raised in the council decree to €164,000, which afterwards twice increased by a total of €100,000.

Techniques

Although the idea of rescuing the site by integrating the Roman monuments into the hotel’s concept as a kind of museum / cellar annex / dining room was finalized rather late, research and preliminary work for conservation and restoration started as early as the building of the hotel, immediately after the assignment of the state subvention in October 1984. The preservation of the exposed ruins had already been secured by protective measures after the excavation, the readjustment of the pile foundations and the postponement of the construction of the basement flooring. The possibilities of using the site as a future museum cellar would...
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Fig. 5. The inner side of the west wall and gate of the late-Roman fortress during the restoration and reconstruction activities in 1987.

Fig. 6. Detail of the inner side of the west wall and west gate of the late-Roman fortress shortly after the opening of the Hotel Derlon Museum Cellar in March 1988. The west wall was reconstructed in modern materials to the ceiling of the basement (see fig. 5) and was painted dark grey. The flooring was laid at the ground level of the fourth century AD.

Fig. 7. The inner side of the west wall and west gate of the late-Roman fortress after the renovation of the Hotel Derlon Museum Cellar in 2007. The reconstructed section of the west wall of the fortress has been removed to give access to the new hotel bar.

Fig. 8. Detail of the masonry of the late-Roman west wall at the inner side: on the right can be seen the consolidated original joints, on the left the renewed joints where the mortar has been pushed back a little bit.

Fig. 9. The exterior of the west wall (land side) was only displayed after the 2007 renovations. Most of the joints have been renewed.
depend on the restoration concept, of course. On the
other hand, the hotel utilization of the basement for
all kind of public activities required a sustainable and
attractive preservation and display of the discoveries.

During the winter of 1984–5, a first technical and
geochemical investigation was carried out to assess any
possible activity of salts in the exposed Roman ma-
sory and in the ground layers of the excavation as a
result of inconstant relative humidity levels and fluc-
tuation in temperatures. As is well known, these salts
could badly damage the surface of mineral building
materials. The volume of damaging chemicals, such as
sulfates, nitrates and chlorides, was found to be unim-
portant, probably as a result of the age-long locking
up of the very old masonry in the earth. However,
one type of stone was characterized as fragile with a
reported recent surface corrosion of 10 mm – the so-
called ‘Greywacke’.

Possible methods of consolidation provided the
conservators with two options:
• maintenance of a constant and high level of rela-
tive humidity (60–80 per cent) and a temperature
of 12–16°C, or
• drying (–1 per cent) and strengthening the ma-
sory with silicon acid ester.

Under the first option, a glazed barrier would have
been necessary between the excavation and the sur-
rounding area. Under the second option, less strict
requirements could be agreed for the climate of the
 cellar, avoiding, of course, too frequent and too great
fluctuations (R.H. 55% + 15; temperature tolerance
5–30°C). Because the hotel wanted to use the cellar for
various activities, the second option was chosen with
less strict requirements to the climate. The absence of
any activity of salts in the subsoil was the reason why a
decision not to install a damp-proof course under the
architectural remains was taken. On the other hand,
all the walls of the basement were covered with an
absorbent mortar and paint. Lastly, the displacement
of air was avoided as much as possible by installing
swinging doors at the entrances.

In the winter of 1985, while the building of the
hotel was continuing, the sands which covered the
archaeological site in the cellar were removed. At the
same time an air treatment engine for heating, clean-
ing, freshening and dehumidifying (4000 m³/h) was
installed, and the excavation was left to dry out for
a period of one year. An enterprise specializing in
masonry consolidation was invited to tender for the
strengthening and a slight restoration of the walls and
for the consolidation of the ground surface.

‘The Dutch National Heritage Service’ (Zeist) got
involved in the Hotel Derlon project in 1986 because
of the earlier governmental allocation of funds. Zeist
Fig. 11. View from the west over the dining platform to the north of the site (in 2007). The original lighting and the cut-away in the ceiling just above the excavation site had been removed for the renovation (see Figs. 13–14).

Fig. 12. View from the east across the site in 2007. Nearest is the reconstructed enclosure of the Jupiter Pillar; in the centre is the hole in the floor of the sanctuary left open to display the cobblestone road in the deepest layer of the excavation and beyond that can be seen a room in the north west corner of the sanctuary (see Fig. 14).
requested a new analysis of the situation, an investigation of the recent deterioration and possible decay, and a complete blueprint for consolidation and restoration. The research was carried out by TNO/IBBC Delft. It focused on the quality of mortar compounds and masonry joints, and produced a differentiated expert report. On the basis of the research report of 1984–5, no damage was expected as result of salts carriage and this was the situation found after removing the filling sands. The same applied for frost damage or other thermal pressure, apart from possible condensation. The TNO-research was therefore directed towards humidity and hygroscopicity, the temperature of the air and surfaces, thermographs and λ-sounding.

The drying process had continued very well since the start of the operation. The bottoms of the trenches were drying with only a few splits due to shrinkage. The humidity came through the joints, but without any carriage of salts. However, some parts of the excavated site were in danger of breaking up as a result of a lack of coherent structure, especially the flooring of Roman concrete.

The outcome of the TNO investigation was the simple advice to clean up the archaeological ruins, dry and slightly mechanically, to fasten the loose plaster, to remove loose mortar and strengthen the rest by spraying it with an silicon ester/ethyl ester mix, to fill up some places in the joints where the mortar had gone, and to replace some stones with new mortar. Measures against rising moisture were not a priority. The climate of the interior of the basement (temperature and R.H.) should be kept as much as possible at a constant level. Treading on the ancient walls and floors should be avoided. TNO also advised monitoring the humidity levels over some time and carefully supervising the consolidation and restoration works. They also advised that the vertical surfaces of the soil baulks should be braced with retaining walls.

The restoration philosophy

As soon as the state subsidy had been apportioned, the basic philosophy for the restoration and presentation of the site was formulated. However, these ideas were revised and expanded after Zeist became involved in 1986.

Keynotes of the final restoration philosophy were:
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Fig. 14. Looking west across the west section of the site in 1988: in the centre is the entrance to a small room in the corner of the enclosed sanctuary.

Fig. 15. Looking towards the new-made niche in the south wall of the basement in 1988: the broken sculptured base of the Jupiter Pillar is in situ and is accompanied by an evocative arrangement of original and casted sculptures.

1. The reversibility of all the techniques used for consolidation and restoration;
2. Modesty and respect in the restoration process and the presentation;
3. Restrictions were imposed on rebuilding / adding to / completing walls and floors to constructional inevitability, on damage after the excavations due to the building activities of the hotel basement, and on necessity for educational clarification (Figs. 10–15);
4. Reuse of ancient building material or similar quarry stone, and adapted lime mortar (Fig. 15);
5. Making a restraint contrast between the original joint, the renewed joint (pushed or pointed backwards), and the new masonry (joint flat) (Figs. 8–9); adding the top of the ruined walls strengthened but not filled up with mortar (Fig. 10);
6. Modest information by means of lighting techniques (Fig. 14), evocative arrangement of original and casted sculptures (Fig. 15), restricted educational restoration, creation of an evocative work of art as scenery background for the excavation, limited opening of the museum, a proper and sober architectural setting;
7. Using discreet architectural tricks to reinforce the properties of an archaeological excavation site in the presentation, such as cut-aways along the borders of original Roman walls marking their outline (Figs. 4–7), the floor of the basement corbelling the excavation trench (Fig. 13), leaving an opening or cut-away in the basement ceiling just above the excavation site (Fig. 13), and the applying of (dark grey) paint on the basement walls to indicate missing Roman walls (Fig. 6).

The realization

Elevations and sections had been made of all Roman walls to accompany specifications of the necessary operations. These kind of builder’s estimates were controlled by Zeist. The consolidation and restoration works were undertaken by the building contractor of the hotel and were executed under the control of a specialized conservator, who was supervised by the municipal archaeological director in cooperation with Zeist. The municipal service for archaeology lent a helping hand. The recommendations of Zeist were followed as much as possible, but for quite a lot of details, ad hoc solutions were found.

1. The conservator used two mortar recipes/formulas:
   a. Masonry mortar: high-hydraulic trass lime in a mixture with coarse sand (sieve 6) with a ratio of 3:6;
   b. Pointing mortar: as masonry mortar, but in place of 1 or 2 units trass lime, high-hydraulic powdered lime (for the colour).
2. The top of the ruined walls were reinforced with a mixture of crushed original mortar in combination with high-hydraulic powdered lime.

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3. The flat joints used on new masonry were moved down enough that the joint did not become too wide and as much of the stone was visible as possible (Fig. 10).

4. The paved road at the bottom of the excavation trench was not been impregnated with any silicon esters. The loose cobblestones were simply covered in clean river clay. Afterwards the whole bottom surface was treated with a quaternary ammoniate or ammine against cellar mildew.

For the rest, as much as possible Roman building material was reused which had been found during the excavation, but which had been broken as a consequence of the building of the previous hotel. Some scrap and rubble from the Church of St. Servatius (then under excavation and restoration), was reused, especially from the Carolingian terrazzo flooring of red concrete. This was crushed and mixed with hydraulic powdered lime for the flooring of the Roman sanctuary (Fig. 12). Original Roman tegulae were sourced from a villa excavation in the vicinity of Namur for the complete reconstruction of the low enclosure of the Jupiter Pillar (Fig. 15).

Between December 1987 and March 1988 work on completing the layout and adding the finishing touches to the display was carried out, always with respect for the site as the first consideration. On Friday 25 March 1988, the Hotel Derlon Museum Cellar was officially opened (Fig. 14).

Epilogue

Now, more than twenty years after the opening of the Hotel Derlon Museum Cellar, we could write a new chapter in the history of this archaeological site. Hotel Derlon is still proud of having a Roman site in its basement, so is the city of Maastricht. During this same period, the department of archaeology in the local Bonnefantenmuseum was closed and the Museum Cellar remains the only place where people can encounter the Roman past of the town.

However, a hotel can only compete by moving forward with periodic modernizations. That could be a threat for the archaeological site in the basement of the hotel. In 2005, the Minister of Culture classified the Hotel Derlon Museum Cellar as a National Monument of Heritage. That means that any future structural alterations should be registered and approved by the National Service for Heritage. In 2007, the basement of the hotel was renovated and also parts of the archaeological site were adapted to the new situation, by which the archaeological presentation is better integrated into the hotel (Figs. 7, 9, 10–12). Even then, not all the keynotes of 1988 were followed. Nonetheless, twenty years after opening, the Hotel Derlon Museum Cellar is as attractive as ever for the guests at the hotel, as well as for visitors and the inhabitants of Maastricht.

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