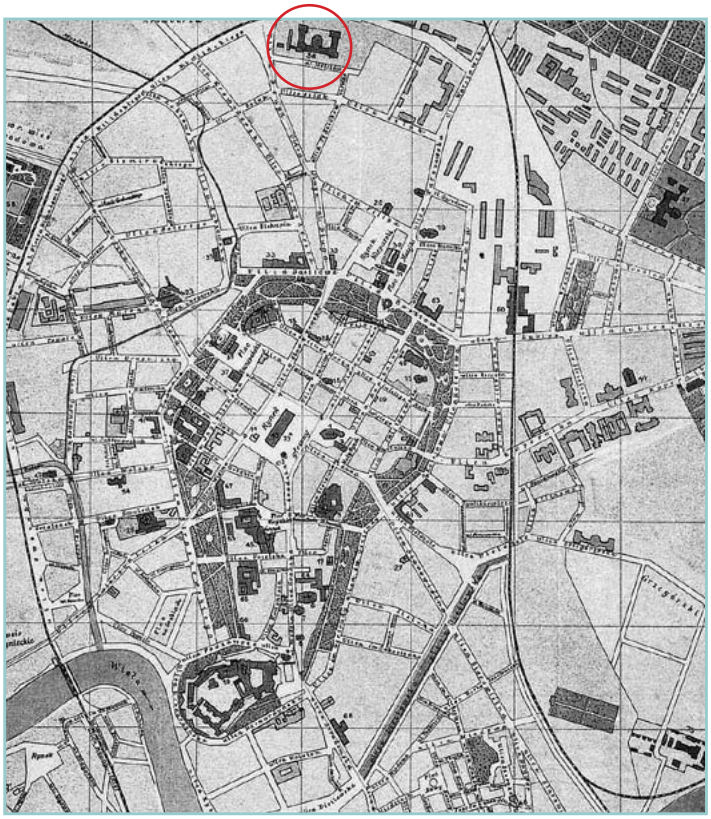
rocare ROMAN CEMENT



Roman Cements for Architectural Restoration to New High Standards

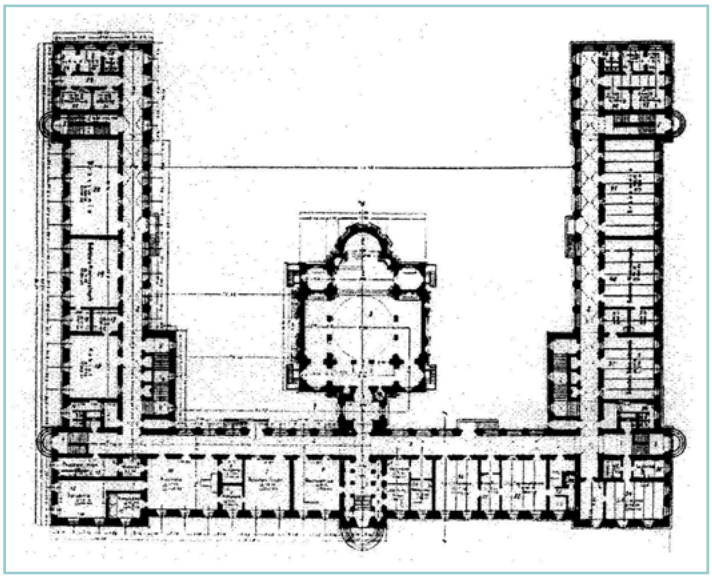




Ludwik and Anna Helcel House for the Poor, 1886–1890, by Tomasz Pryliński, Helclów 2, Krakow, Poland.

The monumental building of the largest and one of the oldest nursery and care institutions in Krakow was a charitable foundation of the wealthy Helcel family. One of the key investments in the field of the social welfare in the second half of the nineteenth century, the institution provided care for up to 300 elderly and sick to new modern standards. A U-shaped layout with centrally located chapel covered with a cupola was inspired by the Invalides in Paris.
A Renaissance Revival façade combining brick with Roman cement renders and decorations, was modelled on Italian Renaissance palaces, Viennese architecture of Gottfried Semper and features of the Renaissance Wawel Castle in Krakow.

Archival plans and photographs.



Layout of the ground floor, drawing by the architect, 1884.



The building around 1890.

Restoration in brief

- restoration of the façade started in 2007, financed through a grant from the Citizen's Committee of the Renovation of Krakow Monuments SKOZK
- in the first phase of the restoration, the Roman cement decorations covering the central projection of the façade were coated with modern paint in a colour not even resembling the original appearance
- the unsatisfactory aesthetic effect led in Spring 2009 to a change to a new conservation concept to use materials based on historic Roman cements compatible with the original stuccoes
- by 2011, the front elevation was restored.

Roman cement stuccoes.



Rustication of the ground floor. A missing ornament reveals the thickness of a render coat applied to a masonry background.

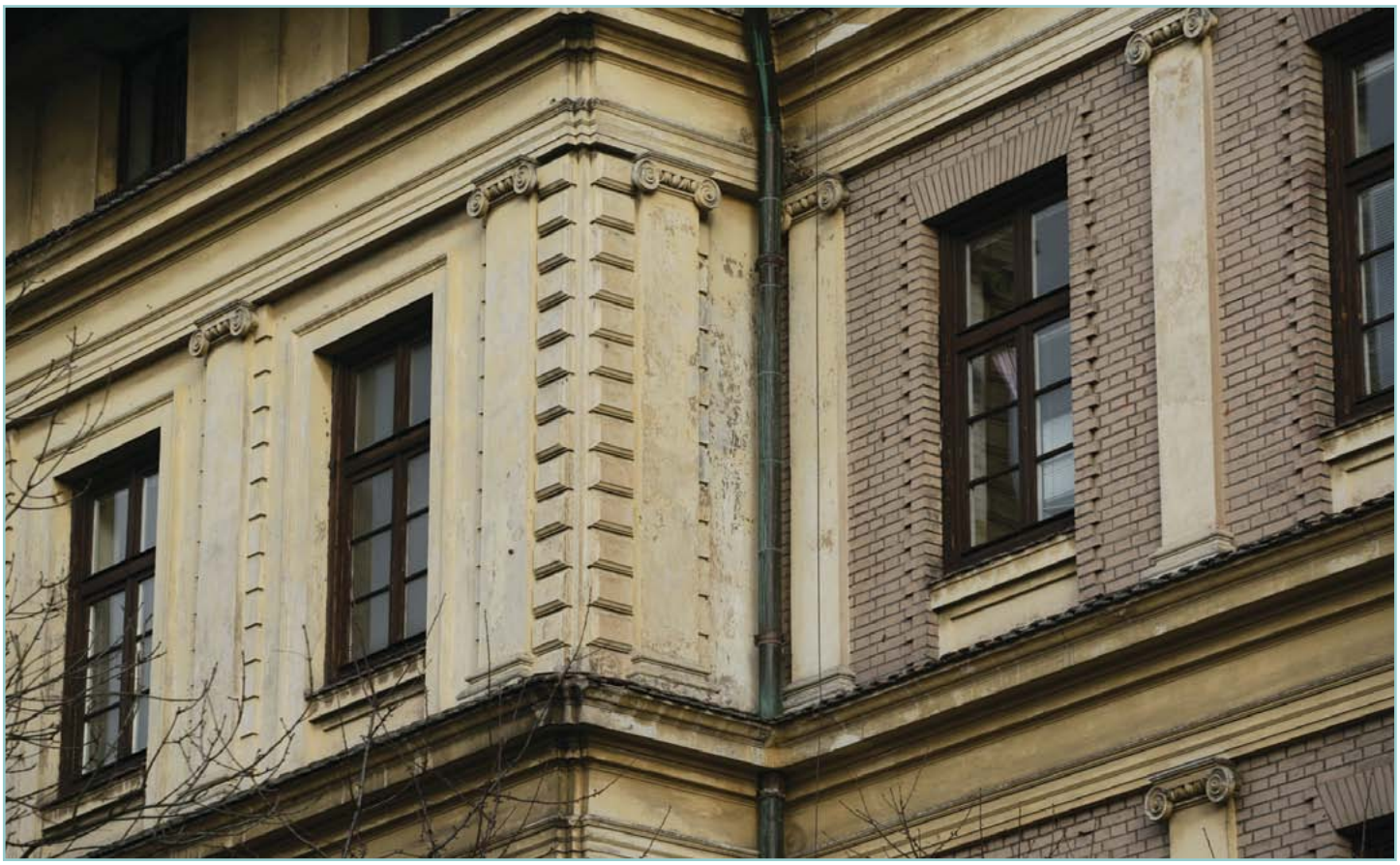


A sandwich structure in which the render coat is followed by the finer second coat providing a final surface.



A cast base of a pilaster with well preserved surface.

The façade before restoration.





The original aesthetic features of the façade – warm ochre colour of the Roman cement renders, brick masonry with coloured joints and red inscriptions calling for charitable deeds – were hidden under the accumulations of paint layers.



The paint layers were in many places weathered and delaminated, revealing the original colour of the Roman cement substrate.



Characteristic shrinkage cracks widened by erosion and made visible by soiling.



Local damage of Roman cements elements was caused by the infiltration of rainwater; chronic excessive dampness of the render leads to freeze-thaw cycles in the cold period and the disintegration of the fabric of the material.



Restoration works.



The central projection of the façade restored in 2007 by coating the Roman cement decorations with modern paint in a colour not even matching that of the original architectural surface.



A cast capital of a pilaster and a cornice – original surface of Roman cement stuccoes revealed by abrasive cleaning using mixture of air, water and fine quartz sand. The cleaning has also revealed the original aesthetic appearance of the masonry.



An armature made of stainless steel wires was introduced before the missing part of the cornice is reconstructed by applying the Roman cement mortar in situ.



Thin Roman cement finish layer (2–3 mm) is laid to re-integrate aesthetically the flat surfaces of the Roman cement renders.
The material used was fine repair mortar from Remmers Baustofftechnik GmbH, Germany based on the Roman cement with the addition of fine quartz sand, mineral pigments and a retarder. It was individually formulated and coloured for the task.

The façade after restoration.

The conservation has restored the original aesthetic concept of the façade, in particular the colour and texture of Roman cement renders.
Two photographs showing parts of the building's façade before and after conservation illustrate the change.











Fragments of the façade after conservation – whitish areas due to migration of lime to the surface have been accepted as a natural 'mineral' appearance of the Roman cement mortars. No impregnation with water repellent agents was carried out to allow for undisturbed hydration of the binder.

Conservation by **Rachtan Art Restauro Ltd**, Krakow, Poland.
www.rachtan.eu
Investigations and tests of the materials:
Marcin Błaszczyk
Consultant: Jacek Olesiak
Supervised by: Elżbieta Wyszyńska – Municipality of Krakow, Section of Monuments Preservation,
Joanna Hiżycka and Monika Fryc-Olejnik – Małopolska Regional Office for the Protection of Monuments



European Commission Research project: ROCARE
Roman cements for architectural restoration to new high standards

www.rocare.eu