

NEWS from the CASTLE

BERKELEY CITY CLUB CONSERVANCY, FUNDING THE PRESERVATION OF JULIA MORGAN'S BERKELEY CITY CLUB BUILDING

2315 Durant Ave., Room 306 🄷 Berkeley, CA 94704 🧼 (510) 883-9710 🧼 www.berkeleycityclubconservancy.org

NEW CONSERVANCY WHITE PAPER WILL HELP SET PRIORITIES FOR THE RESTORATION OF JULIA MORGAN'S POOL

OVERVIEW

Julia Morgan's swimming pool, created in 1930 on the first floor of her Berkeley City Club, is a masterpiece of space, color and light. A series of Gothic arches creates a lofty vaulted space above the pool filled with the turquoise color of the tiles that line it. A long arcade of six windows on the east, plus windows and doors on the north and west, send light sparkling off the surface of the pool. Above these windows are circular windows that encompass small rectangular casement windows that originally could be opened for ventilation. The effect of all this planned space, color and light is magical.

But working against the beauty are severe problems that have developed over the 90 years since the pool was built. The repair and restoration of the pool windows and doors have already been identified by the Conservancy as a major priority. The problems include extreme corrosion in the steel frames of the windows on the east wall.

Determining priorities for repairs and restoration is the focus of a new White Paper that the Conservancy Team, led by Bob Hamilton, is currently developing. What follows is a summary of the issues regarding the poolroom doors and windows that are covered in the White Paper to date.

POOLROOM DOORS AND WINDOWS

The northwest window from the pool to the north garden was rebuilt in 1999 by two club members, the architects Witold and Norma Willer, and a well-known artist and glass craftsperson, Lois Blackburn. Julia Morgan's original plans were referenced to recreate the window with painstaking detail, but using a corrosion-resistant lead alloy for the came, which is better suited to the Plunge Room's corrosive climate.

Came refers to metal strips, slotted on both sides to receive panes of glass. Where the strips overlap, they are soldered. Horizontal reinforcement bars were used, on the outside of the window, to prevent the individual panes from sagging under their own weight, as several of the original windows, elsewhere in the building, have done over the years. These reinforcement bars were properly keyed into the window frame using specially made copper fasteners.



Berkeley City Club Pool, ca. 1930, with original leaded glass windows and glass block skylights

NEWS FROM THE CASTLE FALL/WINTER 2020

News from the Castle is the official newsletter of the Berkeley City Club Conservancy.

The Berkeley City Club Conservancy is a nonprofit organization whose mission is to preserve the Berkeley City Club building, and to promote the legacy of Julia Morgan, its architect.

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The Conservancy Board meets monthly, except for August, on the second Thursday at 7 p.m. The meetings are open to the public. Call (510) 883-9710 for more information.

Public tours of Julia Morgan's clubhouse, sponsored jointly by the Conservancy and the Berkeley City Club, are held on the Fourth Sunday of every month (except December) from 1-4 p.m. The cost is \$10 per person. All proceeds go towards the restoration of the clubhouse. Private tours may also be scheduled. For details, email the Docent Coordinator at

Docent Coordinator at drsarahgill@gmail.com.

BERKELEY CITY CLUB CONSERVANCY

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This approach successfully reproduced the original effect of the separate diamond shaped panes of glass inserted into the framework of lead came. The original steel frame was removed, and its replacement was special-ordered from a steel window fabricator in the Los Angeles area, using galvanized steel with a urethane finish to both match the existing windows and better survive the Plunge Room's corrosive climate.

In 2018, a similar method was employed by the firm, Susan Wagner Designs that restored the triple windows overlooking the pool from the Loggia. The original windows installed in 1930 were long gone by then, broken, and replaced by panels of translucent wire glass, set into the original steel frames.

Wagner Designs used actual diamond-shaped panes of glass set into a grid of slotted lead came, just like the original windows. However, the bottom panes are tempered glass, also known as safety glass, as required by modern building codes for glazing around a swimming pool. This method closely duplicates Julia Morgan's original leaded windows, but at a cost. Tempered glass panes must be heattempered after they are cut, which can alter their shape, making it difficult to fit them into the regular slots of the lead came grid.

The complexity of these solutions means restoring the long arcade of windows on the pool's east side is no small task. A third option is to use a single pane of glass, instead of individual diamond shaped lites, where faux-lead came is applied to either one or both sides. A similar method was deployed on one of the Rear Entry Hall doors, facing the fire escape tower where magnetic tape was applied to both sides of a single pane of glass.

Modern safety-glass requirements mean the single-pane with faux-came method is an option under consideration. Since the Plunge Room's east windows and doors back onto a raised bank on the west side of the parking lot, they would not come under close scrutiny, unlike the Loggia windows into the pool that are readily visible both from the Loggia and from the pool.

These three methods, the Willer-Blackburn northwest window,
Susan Wagner's Loggia windows,
and the Main Hall fire escape
door, provide separate models for
the restoration of the arcade of six
windows along the east side of the
pool, facing the parking lot, and
the single arcaded window
opening onto the north garden.

Each of the six windows along the east side is made up of three spaces topped with Romanesque rounded arches and framed by small Romanesque columns in reinforced concrete. To create the effect of a medieval leaded window, Julia Morgan specified six rectangular frames of steel

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CONSERVANCY WHITE PAPER - Continued from Page 2

that were filled with diamond-shaped panes of glass held in a network of lead came. These steel-framed networks were then placed behind and outside the Romanesque columns, and set into the concrete of the east wall. Two of these networks had small rectangular doors, also made of leaded glass with steel frames, set in in the center space of the window, with special hardware: a mortise lock, steel hinges, and a steel cockspur window latch. The circular windows above these main windows were originally designed to be opened for ventilation, but they were later replaced with electric fans. The fans eventually failed and had to be removed.

THE PROBLEM OF MOISTURE INSIDE AND OUT

The original arcade of windows and doors with their steel frames fell victim to massive corrosion created by the presence of moisture inside and out: the damp atmosphere of the poolroom, and the summer fog and winter rains of Berkeley's climate. The leaded glass panels cracked as the steel frames rusted, and were replaced, perhaps sometime in the 1960s, with single rectangular sheets of wire-reinforced glass, slotted into the original steel frames. Nothing at this time was done to deal with the sources of moisture.

Before installing new windows and doors, the other major problem with moisture needs to be resolved: the moisture now condensing on the interior of the current glass windows and doors that is causing severe corrosion. This problem can only be solved by improving the ventilation of the pool area. Ventilation is a complex problem that will be examined in the next installment of this summary of the Conservancy's White Paper.

~Contributed by the Conservancy Team