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**Taliesin**  
**Spring Green, Wisconsin**  
**Machine Shed Reconstruction Plan**

**Introduction**

This memorandum and supporting Power Point presentation represent the culmination of a three-week intensive study which took place on site May 19- May 29, 2021. The work was carried out as part of the Master of Design Studio, offered through the Department of Historic Preservation at the University of Pennsylvania (UPenn), which has executed a partnership agreement with the Frank Lloyd Wright Foundation (FLWF). The work was presented to representatives of the FLWF, Fred Prozillo, Ryan Hewson, Kyle Dockery and UPenn faculty, Pamela Hawkes, Frank Matero and David Hollenberg on June 7, 2021 and revised June 17, 2021.

The focus of the study was to develop a reconstruction plan for the Machine Shed adjacent to the Midway Barn at Taliesin in Spring Green, Wisconsin, consistent with current conservation practices. A deep understanding of the Shed and its relationship to the landscape was possible only through living on the site and becoming fully immersed in the architecture and landscape of Taliesin.

I appreciate all the help, knowledge, and archival access from The Frank Lloyd Wright Foundation, Fred Prozillo, Ryan Hewson, Kyle Dockery and the support staff who made the stay enjoyable and possible. Of course, the University of Pennsylvania team, Pamela Hawkes, my advisor who I am grateful for consistent guidance on this project, CAD help provided by John Hinchman, Greg Maxwell, Xiaoran Zhang for access to her 3D modeling and Ha Leem Ro and Ally Cavicchio and for their friendship and support

The Machine Shed is currently almost nonexistent, but it is well documented in photos and drawings. It is important in the current scheme of the Foundation's Midway Barn Rehabilitation Plan for the and scheduled as a "Level One," high priority for reconstruction. The intended future use is agricultural program support and as an interpretive space.<sup>1</sup>

Wright's design principles were realized in the original design of the Shed, with a utilitarian use, housing farm machinery, an informal "round house" design<sup>2</sup> and true to Wright's preference for hemicycles and

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<sup>1</sup> Taliesin Preservation, Inc. "Midway Barn Rehabilitation Plan," Draft, October 10, 2020

<sup>2</sup> Lois Davidson Gottlieb, Video Interview with Lois Gottlieb, at Sun Cottage Guest Apartment, Taliesin West, November 30, 1989, 8.

<sup>3</sup> Lois Davidson Gottlieb, *A Way of Life: An Apprenticeship with Frank Lloyd Wright*. (Images, 2001), 95.

natural forms found in nature.<sup>4</sup> This concept is also in the form of the Tea Circle at the main house. It is rough and refined, simple in form and complex design. Taliesin was where Wright's ideas and principles could be worked out and where the problems were solved. The reconstruction proposal is a continuation of that legacy of change and making it better. The shed has an important role in the cultural landscape of Taliesin and the Midway barn. These include Wright's innovative gardening principles<sup>5</sup>, working with the University of Wisconsin, School of Agriculture applying new agricultural ideas<sup>6</sup> and terraced gardening concepts.<sup>7</sup> The entire site as an opportunity for education and as the driving force behind the use of the land. The Barn and Shed demonstrate principles of buildings on a site and as a landscape as a whole, "of the hill not on the hill."<sup>8</sup>

The Midway Barn is intended to be a "center for land use"<sup>9</sup> and the Shed is a key in supporting that goal. As a cultural landscape it was intended to be a self-sustaining farm<sup>10</sup> and sustainable which provided the food for the Fellowship.

### **Methodology**

The Taliesin site was walked and viewed. The research methodology included: on-site observation of the Midway Barn site; extensive measurements and documentation of the remaining stabilized ruin of the machine shed; and review of archival photographs and drawings from the FLWF and TPI. Readings included the historic research conducted on Midway Barns in the Historic Structures Report published in 1994<sup>11</sup>. A scale CAD drawing was created by overlaying a 2020 drone photograph of the remaining walls and slab of the machine shed.

### **History**

The construction of the Machine Shed is documented in the construction photos dated 1949 in the Lois Davidson Gottlieb Collection<sup>12</sup>. "Pork Alley" was constructed approximately in 1952. Arnold Roy confirmed the pig boxes plywood was purchased and constructed to be tent-like structures, placed on the south side of the curved access road approaching the Machine Shed.<sup>13</sup> The addition of the Machine Shed and its relationship to the Midway Barn continues. This is consistent with Wright's concepts of his buildings evolving as architectural reality and a constant visual testing ground. The HSR report incorrectly attributes the construction date as 1952. In photos dated pre-1948, no shed is evident.

Studying available historic drawings from The Frank Lloyd Wright Foundation Archives and Taliesin Preservation Inc., the HSR drawings and the CAD drawings created by the author reveals four different building module counts. The FLWF drawings are not dated but presumably before 1948 depict plan,

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<sup>4</sup> Frank Lloyd Wright, *An Organic Architecture: The Architecture of Democracy* (London: Lund Humphries & Co. LTD., 1939), 3.

<sup>5</sup> Taliesin Preservation, Incorporated, "The Taliesin Estate Overview", 4.

<sup>6</sup> Barbra Wyatt, *Taliesin Historic Landscape Report* (Taliesin Preservation Commission, 1999), 16, 17

<sup>7</sup> Ryan Hewson, Oral Presentation, Taliesin, May 20, 2021.

<sup>8</sup> Frank Lloyd Wright, *Frank Lloyd Wright, an Autobiography*. Duell, Sloan and Pearce, 1943, 168.

<sup>9</sup> Taliesin Preservation, Inc. "Midway Barn Rehabilitation Plan," Draft, October 10, 2020

<sup>10</sup> Keiran Murphy, "A Brief History of Midway Barns", Taliesin Preservation, Inc., draft, September 7-14, 2007, 9.

<sup>11</sup> White, Jay. "Midway Farm Frank Lloyd Wright's "Taliesin" Spring Green, Wisconsin: Historic Structures Report." PDF file. May 1994. Provided by Taliesin Preservation Inc. (TPI).

<sup>12</sup> Lois Davidson Gottlieb Collection, owner: Lois Davidson Gottlieb

<sup>13</sup> White, Jay. "Midway Farm Frank Lloyd Wright's "Taliesin" Spring Green, Wisconsin: Historic Structures Report." PDF file. May 1994. Provided by Taliesin Preservation Inc. (TPI), 19.

elevations and section drawings of the shed. These drawings indicate a 7-module layout for the shed. Later drawings, which appear to be construction drawings for the Shed, show an 8-module layout. These drawings also include a parts list for construction. The HRS report of 1994 plan depicts 9 modules and 10 in the Midway Barn Rehabilitation Plan, draft dated 10.10.2020.

The sketch of the Pig Boxes drawn by the Fellowship, but not dated, is an important component of the overall design Wright intended. It is evident in the photographs post 1948 showing what was called "Pork Alley", a rhythm was created with the use of the triangular shaped pig boxes in the landscape and represent a repeat motif in Wright's designs.

Post 1948, there were modifications to the roof of the shed, gable extensions were added at the front. This has been referenced in Frances Nemtin's book, *Life in the Fellowship*, as "elephant ears."<sup>14</sup> The two gable extensions modifications to the roof might have been added to accommodate the height of a piece of farm machinery. The PowerPoint presentation slide 7, post 1948 photo shows this modification.

### **Existing Conditions**

The Machine Shed was removed in 1986, as confirmed by Floyd Hamil, who arrived at Taliesin in 1897 and stated the Shed was removed the year earlier. He was unaware of the condition of the Shed prior to removal.<sup>15</sup> Two sections of the sandstone walls facing the barn remain, as well as three partial sandstone walls that formed the bases of the east sections that taper off to grade. The existing sandstone appears to have been coarsely pointed at the stone joints and the outward face has been pointed with what appears to be cement mortar. There appears to be consistent weathering and deterioration of the stone caused by the harder and denser cement mortar. Three concrete slab sections projecting above the sloping grade remain, supported by three concrete piers but are in poor condition. The base supports are cracked and falling in. One steel column remains in place along with two partial column footing pads. The columns were used to support the roof.

### **Stakeholders and Values**

The stakeholders who would likely be involved in formal or informal design review of this project would include:

Frank Lloyd Wright Foundation  
Taliesin Preservation Incorporated  
Wisconsin Historic Society  
Local Conservation Organization

Values are important in determining what to conserve within a historic site. The term values is defined as characteristics that a certain place or thing possess and this influences why it should be preserved. One example would be the artistic values of the Taliesin main house exhibits as a work of art. These values include historic, aesthetic, cultural and use value for the site.

Historic values include:

- The Shed as an expression of Wright's seven principals of historic architecture,
- The connection of the Shed to the Midway Barn,
- Wright's goal of the farm being self-sufficient and a strong involvement of the Fellowship as part of their education in farm work.

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<sup>14</sup> Frances Nemtin, *Life in the Taliesin Fellowship*. F. Nemtin, 2002.

<sup>15</sup> Floyd Hamil, Taliesin Fellowship member oral history, May 5,2021, Taliesin with author.

- Emphasis on simple local construction
- Wright's agriculture concepts and Taliesin as a cultural landscape.

Aesthetic values include:

- The relationship of the Shed to the Midway Barn
- The evolution of the site as a testing ground for Wright's design concepts.
- Wright's use of what was known as Welsh construction techniques and
- The concept and belief in organic architecture.

Cultural values include:

- The strong Fellowship legacy and commitment.
- Community engagement through events and theater.
- Wright's principles as a center for land conservancy and
- Wright's Innovative farming concepts.
- Future potential use values include:
- Creating a sustainable environment and include community engagement.

Use Values include:

- The use of the space as an Interpretive space and various important functions.
- The use of the space as potential agricultural tourism hub.

### **Character Defining Elements and Significance**

The scale of the shed is of key importance to the relationship the Barn, its height in the landscape and location on site. The form of the Shed is utilitarian with an ease of access for farm machines. It is designed to be an organic form, shape and consistent with Wright's hemicycle designs, this is similar to the tea circle at the main house. The materials used are honest natural materials and site consistent. The entire design has the architectural rigor, beauty consistent with the entire site architecture.

The existing photos and design details reveals the complexity of construction and care for the design which was not just any machine shed. It is interesting to note the side wall framing in the photos show an inverted y cross bracing construction for the side walls. This detail requires further exploration and research as the design concept behind this. The disparity in design and module count should be further analyzed through historic photos and oral conversations could shed light on this. The existence of the existing historic photos is a valuable source for physical evidence, color and roofing and details. And provide a reliable indicator of relationship to landscape. It is clear in the historic photos that the height was critical in silhouette of landscape and its relationship to the Midway Barn.

### **Preservation Philosophy**

The preservation philosophy for the Machine Shed includes:

- Researching and documenting the property's historical significance.
- Focus on the documented and physical evidence which is needed to justify reconstruction of the partial surviving building.
- Investigating the remaining archeological remains and identify and evaluate those features which are essential to the design and plan of the building consistent with Wright's original design.

- The terrain surrounding the Shed and the site are important landscape features need to be maintained and avoid changing the existing terrain around the Machine Shed.
- Extant historic features of the Machine shed, the site and setting should be identified, retained, and preserved.
- Further investigation from qualified individuals with knowledge in restoration of masonry and structural engineer is recommended.
- Determine if partial restoration is possible, with reconstruction being the most likely option. The reconstruction would follow the guidelines of the Secretary of State Standards for Reconstruction. Based on review meetings with representatives of the FLWF Foundation, Fred Prozillo and Ryan Hewson.
- The Preservation philosophy outlined above would meet the Foundation's proposed program and reconstruction requirements.

#### Exterior

- Reconstructing the partial surviving building to recreate the documented historic appearance.
- The reconstruction of the partial surviving building using as close as possible, original and similar building materials such as stone, wood, and steel columns and hardware.
- Recreating the documented design of exterior features, such as the roof form and its coverings, and architectural detailing.
- Reproducing the appearance of historic paint colors and finishes based on documentary and physical evidence as siding and paint colors remaining on the adjoining Midway Barn.
- Installing exterior electrical and telephone cables underground or in the least obtrusive location possible.
- Using signage to identify the building as a contemporary recreation.

#### Interior

- Reconstructing building site features based on documentary and physical evidence.
- If possible, use like or similar materials while recognizing new function requirements.
- Attempt should be made to articulate and separate the reconstructed portions from the new elements required to support new functions.

#### **Proposed Design Concept**

The design concepts attempt to realize goals of the Foundation and the Preservation Philosophy outlined above and true to the original, construction and materials.

The existing shed was approximately 1,100 square feet. A capacity calculated at 7 people per square foot according to the International Building Code, that would provide a capacity of approximately 158 people. This would also allow for two 156 square foot accessible, gender-neutral bathrooms.

Every attempt will be made to retain the historic relationship between the adjacent Midway Barn and landscape. Materials will include the 10" wide vertical siding, 2x4, 2x10, 2x6 as in the original photos and drawings.

The original height of 7'-0" should be increase to 7'-6" on high side of sloped roof. This will be further explored by lowering the grade yet providing ADA access. Every attempt should be made to hold the original roof relationship to the Midway barn.

The original gravel floor will be reinterpreted to pea gravel cast in cement as in BMO Harris Bank designed by William Wesley Peters of the Taliesin Fellowship in Spring Green. The original gravel floor would not meet ADA accessible requirements. The pea gravel cast in cement would be similar material consistent with the Preservation Philosophy and meet code requirements.

Flexible furniture in the spirit of Wright designs will be considered to meet Foundation goals for flexibility.

The addition of removable tensile structure is suggested for increased usable square footage for events and weather conditions. The completed concept would follow the idea of Wright's roofless room and the Tea Circle located in the exterior at the main house. and without a division between interior and exterior. The complete space can be open or sheltered at will with the addition of roller barn enclosures.

The materials and site components will reflect the existing materials, wood, stone and gravel and metal.

The reflected ceiling plan will express the wood 2x4 and 2x6 of the original construction. The original roofing material needs further investigation, and similar current material sourced.

Lighting would be added such as industrial LED strip lights at the rear wall, strip light used to highlight the exhibit displays. It is unclear if the original Shed had lighting, but the addition of lighting would be required to accommodate evening event functions.

## **Comparables**

### **Davidson Little Farms Unit**

Follows similar principles for farm distribution as a suburban model.  
The concept included a mini roadside farm and stand, retail sales component  
Supported connection to the land a requirement for democratic society  
Concept of sustainable food movement, direct to consumer sales

### **Florida Southern College**

National Historic Landmark  
Largest collection of FLW buildings on a site  
Recent new construction from Wright's design and construction drawings  
considered a reconstruction of visitors' center as visitors center and for events.

### **Los Poblanos, New Mexico**

National Historic Landmark

Designed by John Gaw Meem in 1932, “father of Santa Fe style”

Historic Inn, guest room and organic working farm, supports restaurant and merchandising products.

Renovated dairy barn to restaurant, bakery, retail and production space.

Field to fork dining

Cultural landscape

### **Shelburne Farm, VT**

National Historic Landmark

Learning center for sustainable farming

1,400 working educational farm.

Offer grounds for like-minded groups as campus for learning.

Strong community connection

### **Conclusion**

Recommendations for Further Study:

- Additional investigation by qualified preservation specialists to determine the viability of the remaining stone walls and elevated concrete slabs.
- Further oral histories of Fellows who might have direct connection to the construction and demolition of the machine shed.

Taliesin was a continual construction evolution, testing ground for Frank Lloyd Wright’s architectural concepts and exploration of changing social ideals practiced with the Fellowship. The reconstruction adaptive reuse of the Machine Shed are consistent with Wrights’s concepts which were explored at Taliesin. The reconstruction of the Machine Shed provides the Foundation the opportunity to continue Wright’s legacy.