

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

## **PRESERVATION RECOMMENDATIONS**

### **Preservation Philosophy And Objectives**

The Town is obligated to maintain and preserve the structures at Burnt coat Light Station for the public benefit, following the guidance of the Maine Historic Preservation Commission. The Commission follows the preservation philosophy and approach set out in The Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings (revised 1995). Preservation as determined in the Secretary's Standards is defined as "the act or process of applying measures necessary to sustain the existing form, integrity and materials of an historic property."

In line with our objectives our approach to any intervention is as follows:

- Repair rather than replace damaged building materials when possible.
- Preserve all sound existing building fabric.
- Replace in kind all decayed and severely deteriorated building fabric.
- Acknowledge and respect the story of change to all buildings.
- Make any alteration or addition readily reversible.
- Treat or clean building materials carefully. Intervene only when necessary and in the least aggressive manner possible.
- Recognize the need to balance the cultural values with the socio-economic values of the building.
- Insure that adaptive use alterations are in keeping with the federal guidelines and adhere to the approach guidelines set out above.

### **Objectives**

Striking the appropriate balance between necessary replacement, long-term durability and adaptive use, and the desire to retain the greatest amount of historic fabric is the most important challenge faced in the preservation of historic buildings. These recommendations strive to identify the most appropriate sequence for intervention, to secure the buildings' long-term conservation and adaptive use, and to respect the buildings' fabric and methods of construction.

This assessment plan does not include an evaluation of existing systems and structural framing. The structural repairs and stabilization requirements are extensive. Following this section is a letter to Al Hodson, PE, prepared by HBA, in October 2006 identifying the primary structural issues to be addressed. In addition no assessment of mechanical, electrical and plumbing systems have been included in this report.

### **Format**

This section is for planning purposes and should **not** be used to execute any construction work on these buildings. The purpose is to provide The Town of Swan's Island with an overview of the conditions and recommend work priorities with an estimated construction budget for the recommended work. The recommendations below are based on the existing Condition Assessment shown in Section V, and the Adaptive Use and Landscape Recommendations described in Section VI.

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

**Immediate Work:** This represents work that is critical and should be completed as soon as possible and within the next 1-2 years. It represents potential safety hazards and deteriorated conditions that would result in irreversible structural damage to the building fabric. In addition the work recommended is designed to prevent rapid deterioration of building fabric.

**Mid-term Work:** This work is urgent, should be done within the next 3-5 years. Further delay could result in irreparable damage to the historic fabric.

**Long-term Work:** This work should be done within the next 7-10 years in order to maintain the existing building fabric and is meant to assist The Town of Swan's Island in planning for completing the transition to a public museum.

### **RECOMMENDED REPAIRS**

#### **Site Work (all buildings)**

Below is a list of recommended work by priority. It should be read in conjunction with the site improvements shown in the Strategic Plan for the landscape.

#### ***Immediate Work:***

1. Regrade to prevent excess moisture build up adjacent to buildings especially along the southwest corner of the Oil House, where the grade and drainage slopes steeply down from southwest to northeast. Similarly, this condition occurs on the northwest corner of the Keeper's dwelling where the hill slopes down to the southeast and moisture can be potentially trapped along the north foundation walls.
2. Remove inappropriate concrete parking and swales along base of the perimeter walls, which trap moisture.
3. Install a new wood walkway and barrier-free entrance on the north elevation of the Keeper's dwelling. See A-6.1.
4. Make necessary repairs and improvements to the wood walkways to provide safe access, as described in the strategic plan for landscape.

#### ***Mid-term & Long-term Work:***

1. Follow the strategic plan for landscape improvements, as set out and prioritized in Section VI.

### **KEEPER'S DWELLING**

Below is a list of recommended work by priority.

#### ***Immediate Work:***

1. The exterior of the Keeper's dwelling is currently undergoing restoration, which includes structural stabilization repairs as recommended by Al Hodson, PE. This work is scheduled to be completed in 2007 and includes:
  - a. Rebuilding of the fieldstone foundation walls where they are structurally unstable.
  - b. Rebuilding of the basement foundation walls to provide sound footings and supports for floor framing.

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

- c. Repair and restoration of structural framing elements (many of which were completed in 2006), which are a result of previous alterations to the dwelling, such as the 1872 partition removal and supporting the wall under the east elevation of the Vestibule Room #109.
  - d. The rebuilding and reinforcement of the Piazza floor, which as it relates to the recommended structural stabilization work. Installation of new railings to allow for safe public access to the Piazza. The new wood railings should be designed based on historic 1930's photographs. However, they must also comply with minimum Code Safety requirements, which may reduce the spacing of the balusters. Code requires spacing to be no greater than a 4" sphere.
  - e. Renovation and rebuilding of the exterior chimney using historic photographs at the west end of the dwelling.
  - f. Clapboard repair and restoration, primarily where the clapboards have been removed for structural stabilization work.
  - g. Restoration of roof eaves trim, including installation of built-in wood gutters and downspouts properly sized to provide roof drainage away from the building. This work was part of the ongoing reroofing work in 2006.
  - h. Alteration of the clapboard detail, where it meets the stone foundation walls to allow a proper drip edge to be installed and prevent wood rot deterioration to the sill plate.
  - i. Upgrades to floor framing to allow for assembly use of the first and second floor, as determined by the structural engineer.
  - j. Review by the structural engineer of the structural framing for the roofs to ensure that current wind and snow load requirements are met. Installation of roof framing reinforcement as necessary.
2. Other work recommended in Immediate Work not involving structural engineering issues:
- a. Restoration of the double-hung windows and frames, including the removal of exterior metal grilles and storms, which detract from the architectural character of the fenestration.
  - b. Restoration and adaptive use of the doors to allow barrier-free access, as noted in the Adaptive Use Recommendations Section VI. See A-6.1.
  - c. Repair and restoration of all wood flooring with temporary repairs to allow for safe access to the first floor by the public.
  - d. Repair and restoration of the brick access into the basement as well as installation of a new wood access door.
  - e. Upgrades recommended for the Phase 1 Adaptive Use are designed to provide safe access into the first floor of the Keeper's dwelling for members of the public and include the widening of Door D-106, a new barrier-free wood walkway access and entrance along the north wall and the stabilization of existing paths around the perimeter of the building. Install a sound system with oral history recordings.
  - f. Restore the wood railings to the Piazza to replicate historic photographs and allow the deck to drain properly. Restore and repair the wood Piazza floor deck including stripping and refinishing the deck surface. (Note: Unstable Piazza deck areas were stabilized during immediate work phase.)

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

***Mid-term Work:***

1. Paint exterior wood clapboard and trim.
2. Rake out and repoint foundation walls not previously restored using an appropriate Type N Mortar.
3. Install interior storm windows throughout. These can be easily removed and stored during summer months to allow for ventilation throughout the building. Exterior storms are a visually less desirable alternative because they detract from the fenestration patterns and create large reflective glazed panels.
4. Interior finish restoration will focus on the second floor with the removal of all biological and mold growth using appropriate remediation methods, which can include cleaning and some plaster and lath removal. An environmental assessment of the mold on this floor is recommended to insure the safety of the remediation crew.
5. Failed unstable plaster should be removed and new sheetrock with veneer plaster installed as necessary. Every effort should be made to retain as much original sound plaster as possible.
6. Repair and restoration of wood floors to include paint removal and refinishing once the vinyl tile has been removed. Finish analysis is recommended to determine the color and finish on the wood floors.
7. Restoration and repair of all interior wood trim, including window and door surrounds and baseboards.
8. Installation of new solid wood paneled doors, as necessary on the second floor.
9. Reconfiguring and renovation of the Bathroom and new Kitchen, as described in the Adaptive Use Recommendation Plans in Section VI. See A-6.2.
10. Installation of a new skylight where previously removed by the Coast Guard.
11. Painting of all second floor finishes.
12. Installation of new electrical wiring and plumbing, as necessary for the adaptive use.
13. Disconnection and drainage of all existing radiators, however, the radiators should be retained as part of the interpretation of the house. Installation of a new color gas stove to provide some background heating during colder evenings in the summer months.

***Long-term Work:***

1. Adaptive use and conversion of the first floor interior into a museum and community meeting spaces. Refer to recommendations set out in Preservation Planning and Adaptive Use Section VI.
2. Restore all finishes, including plaster, wood floors and trim.
3. Complete minor alterations to walls to allow for a meeting room (old Kitchen) and two period rooms, which will be used to interpret the 1930s period at the Light Station.
4. Other improvements will also include a new small kitchen for catering events and new barrier-free restroom.
5. New electrical wiring and lighting should be included, and an electrical engineer should review the conditions and make recommendations.

**LIGHT TOWER**

***Immediate Work:***

1. All contemporary concrete should be removed from the base of the Light Tower and the

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

- brick behind repaired as necessary to allow for proper ventilation of the masonry at grade.
2. Brick suffering from rust heave is to be rebuilt and restored as necessary. To be reviewed by a structural engineer.
  3. The steel deck and support brackets, which cantilever out from the masonry tower are to be either replaced with new stainless steel brackets or restored and repaired in place. This work must be coordinated with a structural engineer.
  4. The metal lantern should be stripped of paint and the corrosion removed, primed and repainted with an appropriate paint product for metal work.
  5. The handrails along the perimeter at the lantern platform should be removed where severely corroded and replaced, preferably with new stainless steel designed to replicate the metal railing work and properly secured according to the structural engineer's recommendations.
  6. All glazing in the lantern should be repaired and restored especially where elements of the trim are missing.
  7. The lantern interior woodwork is to be stripped of paint, consolidated as necessary and restored, primed and repainted.
  8. The floor in the lantern is to be stripped of paint and repainted.
  9. The copper vents installed in the lantern wall are to be cleaned and made operational to allow proper ventilation of the lantern.
  10. All hardware is to be repaired to allow the lantern door to operate properly.
  11. The three glass block windows installed in the tower should be removed and replaced with high quality solid wood double-hung windows designed to replicate the original windows. They should be opened during the summer to provide better ventilation in the tower and reduce the high levels of moisture. Stainless steel screens should be installed during summer months.
  12. The steel stairs in the tower providing access to the lantern are to be inspected by a structural engineer and all corrosion removed, sanded, primed and repainted with an appropriate metal paint.
  13. The wood ramp access into the Light Tower is to be stabilized and restored with all the wood being prepped, primed and painted.

***Mid-term Work:***

1. All loose and uneven paint should be removed from the brick and all biological growth cleaned using the gentlest, most appropriate means.
2. All open and failing mortar joints are to be raked out and repointed with an appropriate mortar assumed to be Type N. Mortar analysis is recommended.
3. All corrosion surface staining on the painted masonry is to be removed using the gentlest cleaning means possible to avoid damage to the brick.
4. Brick rebuilding and repair on the underside of the brackets is to be completed during the immediate work, however, there may be some additional brick restoration and repointing work in this phase.
5. The interior brick walls should be cleaned of biological growth and touch-up repointing work completed as necessary.
6. The metal stairs should be cleaned and all rust removed, repairs completed, primed and painted.
7. After repointing the exterior brick walls should be painted with an appropriate paint coating such as a Keim paint or possibly a lime wash application. Options on appropriate

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

- paints/finishes should be completed prior to determining the approach
8. Material analysis should be completed to ascertain the condition of the brick surface, which was sandblasted during the 1970s.
  9. Miscellaneous surface mounted attachments on the exterior masonry should be removed.

***Long-term Work:***

1. The exterior entrance door should be changed to provide a more appropriate entrance door to the Light Tower. The existing door was designed as a vandal-proof entrance, however, as operations and visitation dynamics change, it is hoped that vandalism will no longer be such a big issue and that the door can be restored to something more appropriate in accordance with historic documentation.
2. Installation of appropriate lighting and necessary handrails to provide safe access for public visitors. An electrical engineer should review the lighting options and possible emergency lighting.
3. Public visitation to the Light Tower should be limited, and it is not recommended that members of the public be permitted to use the exterior lantern platform. The steps and access into the lantern would need to be improved to provide safe access into the lantern for no more than three visitors at one time.

**Summary**

The prioritized recommendations listed above for the Light Tower respond to the conditions identified in Drawings A-2.21, A-2.22, and A-1.20 through A-1.22. These drawings identified deteriorated conditions and are supplemented with photographs of the conditions observed. While it is noted that two phases are recommended for the Light Tower to address immediate and mid-term concerns, we would ask the Town to consider consolidating these efforts, in part because the logistics and staging for access to the platform, which has severely corroded would be extremely difficult without scaffolding, and once scaffolding is installed, there is an opportunity to complete the masonry restoration work, which while not immediately urgent in terms of failure will become necessary in short order (within the next 2-3 years) and might, therefore, be considered as part of the first phase. It should also be noted that in terms of fundraising it may be more desirable to obtain funds to restore the entire exterior of the Light Tower at one time because this might be a more attractive funding opportunity.

**OIL HOUSE**

***Immediate Work:***

1. Regrade along the perimeter following the guidelines set out in site work above.
2. Repair and rebuild the masonry corner and foundations following guidelines from a structural engineer at the northeast corner where there is substantial settlement.
3. Remove the concrete curb along the perimeter of the Oil House, which was probably intended to provide a drainage swale and provide proper drainage using grading.
4. Remove and replace the shingle roof with a new shingle roof in black to replicate the original slate roof.
5. Repair all rotten and missing woodwork on the louvered vent. Prime and paint and re-roof.
6. Install stainless steel mesh on the inside of the vent louvers to prevent pest infestation.

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

7. Repair and restore all wood trim at the roof.
8. Strip all paint from the brick using an appropriate paint removal product that is PH neutral.
9. Rake out and repoint the brick walls on the exterior. Complete mortar analysis to match the mortar strength, color and texture.
10. Install a new wood threshold and restore the door according to historic drawings of typical Oil Houses.

***Mid-term Work:***

1. Restore the interior finishes in the Oil House to include stripping paint and stucco build-up on the interior brick walls, rake and repoint brick.
2. Remove the cement parging on the floor and restore the brick floor. Clean with gentlest means using PH neutral cleaning product.
3. Rake out and repoint interior brick walls.
4. Provide a safe wood walkway access to the Oil House from the southeast and as recommended in the Landscape Strategic Plan.

***Long-term Work:***

1. Adaptive use of the Oil House might be for a portable type toilet to be used by visitors to the Light Station, who are participating in hiking, biking, and other outdoor activities. This restroom would not be barrier-free but would provide basic facilities when the Keeper's dwelling was closed.

**Summary**

This building is extremely small and while we are aware that funds are limited, it may be more cost effective to complete all the restoration work on the Oil House at one time. If this recommendation is accepted, there is an opportunity to convert the Oil House in the first phase to provide a restroom facility on the site immediately, this would benefit hikers and bikers who already frequently visit the site and currently have no facilities.

HBA considers that the roof is obviously an immediate priority, however, the masonry work except for the failed areas in the northeast corner could be done in a second phase if funds are limited. It should be noted that these Oil Houses were fairly standard and several remain, as well as original drawings for their construction. These drawings should be reviewed carefully prior to commencing any restoration work.

**BELL HOUSE**

***Immediate Work:***

1. Structural stabilization of the four fieldstone piers, including repointing and rebuilding as necessary and indicated by a structural engineer.
2. Review of the structural floor framing and sill plates at the base of the Bell House should be completed by a structural engineer.
3. Replacement of the roof with a short-term new asphalt shingle roof. Determination on the longevity of the roof will depend on whether it is feasible in the long term to rebuild the Bell Tower.

**Historic Preservation Plan for  
The Burnt Coat Harbor Light Station  
Swan's Island, Maine**

---

4. Minor repairs to missing and loose wood shingles. See Mid-term below.
5. Restoration of the rafter end and installation of a proper drip edge to the roof.

***Mid-term Work:***

1. Restoration of the double-hung window to improve ventilation during the warmer months. Install a screen to prevent pest infestation.
2. Restoration of the door and all hardware, including removal of corrosion on hardware.
3. Restoration and repair the interior wood work, which has suffered wood rot and deterioration, including several wood floor boards.
4. Repair wood shingles as necessary, including installation of new shingles using all stainless steel attachments. Eventually all the shingles will fail due to the corrosion of attachments and will need to be replaced. An option for removing, salvaging, and reinstalling all the shingles with stainless steel attachment should be considered at this time.
5. Painting of all shingles.

***Long-term Work:***

1. Reconstruction of the Bell Tower would restore the view to the 1930s period for which the site has extensive documentation, including oral histories many of which describe the process of ringing the bell during bad weather. Reconstruction should be based on historic drawings and photographs.
2. The Bell Tower reconstruction could include the reinstallation of bell and if possible, the mechanics for its operation. This would provide an excellent interpretation tool for the site and allow people to understand the lifestyle and work involved in operating a Light Station during the 1930s.

**Summary**

If funds are available, the Bell House immediate and mid-term work should be completed together as one project because of the small size of the building. The long-term work involving the reconstruction of the Bell Tower would clearly be completed as a separate project and would be dependent on the success of the museum and the public interest in the operation of the Bell Tower and its interpretation to the general public.

This concludes our review and prioritized recommendations for the restoration and Adaptive Use of the buildings at the Burnt Coat Harbor Light Station. These need to be reviewed in conjunction with the Strategic Plan for Landscape, which identifies a number of recommended safe access walking decks and steps as well as landscaping and signage to allow the public to enjoy this site as a whole.