

P.O. Box 1749 Halifax, Nova Scotia B3J 3A5 Canada

Item No. 7 Halifax Regional Council October 7, 2014

то:	Mayor Savage and Members of Halifax Regional Council		
	Original Signed by Director		
SUBMITTED BY:			
	Jane Fraser, Director, Planning & Infrastructure		
DATE:	May 2, 2014		
SUBJECT:	Federal Lighthouse Disposal: HRM Options and Implications		

INFORMATION REPORT

<u>ORIGIN</u>

September 10, 2013 motion:

MOVED by Councillor Adams, seconded by Councillor Hendsbee, that Halifax Regional Council request a staff report looking at options and implications arising from the decision of the Federal Government to divest itself of lighthouses and lighthouse maintenance and access.

LEGISLATIVE AUTHORITY

HRM Charter:

61 (1) The Municipality may acquire and own property granted or conveyed to the Municipality either absolutely or in trust for a public or charitable purpose.

63 (1) The Municipality may sell or lease property at a price less than market value to a nonprofit organization that the Council considers to be carrying on an activity that is beneficial to the Municipality

79 (1) The Council may expend money required by the Municipality for

- (x) lands and buildings required for a municipal purpose;
- (v) any charitable, nursing, medical, athletic, educational, environmental, cultural, community, fraternal, recreational, religious, sporting or social organization within the Province,

BACKGROUND

The situation stems from the Federal government's decision in 2010 to divest itself of surplus lighthouses. The Heritage Lighthouse Protection Act set a date (May 2012) by which community groups or interested parties could nominate a surplus lighthouse for heritage designation and indicate their interest in taking ownership of it. Parks Canada will determine by May 29, 2015 which nominations meet the established heritage designation criteria. A petition only serves to nominate a lighthouse to be considered for designation as a heritage lighthouse. A petition's signatories do not need to be part of a body that intends to buy or otherwise acquire the lighthouse.

For any nominated surplus lighthouse that meets designation criteria, the interested organization must submit a written commitment to acquire the lighthouse and maintain its heritage character. This commitment must be accepted by the Department of Fisheries and Oceans (DFO) prior to the heritage designation being finalized. Potential owners must also submit a business plan to demonstrate their proposed use of the property, its economic viability, and their capacity to manage it. The plan must also afford a reasonable level of public access to the site. If the lighthouse contains an active navigation aid that must remain operational the owner must also agree to allow DFO right of access to operate and maintain the navigation aid. Once all divestiture requirements are satisfied, the lighthouse would be transferred to new owners for a nominal fee. Non-petitioners are free to submit business plans to acquire a lighthouse, as well as the group that submitted the original petition.

If a lighthouse is not nominated or designated under the Act, it will remain in Fisheries and Oceans Canada's real estate holdings. DFO's position is that at this time there is no immediate need to replace or demolish lighthouses that continue to serve a function in their existing structural condition. If the condition deteriorates to an extent that the service to mariners is compromised, or the structure poses a safety hazard to employees or the public, DFO will consider available options. At this time DFO's priority is to facilitate transfers which preserve heritage character and allow ongoing public access to lighthouses. Currently there are no plans for surplus lighthouses to be sold on the open market; however DFO may consider this alternative in the future.

The Heritage Lighthouse Protection Act's underlying principles of long term heritage preservation and public access mean that any group interested in long-term ownership will likely be given the first opportunity to acquire the property. However, individuals, municipalities and community-based non-profit groups may use surplus lighthouses without owning them, via a lease of licensing agreement with DFO permitting a lighthouse to be used for alternate purposes. Under Treasury Board policy, such an agreement could be terminated by an eventual transfer of ownership.

Nova Scotia has the largest number of lighthouses of any province in Canada. It also has some of the oldest, including Sambro Island which began operating in 1758 and is the oldest continuously operating lighthouse in the Americas. When Parks Canada issued the call for nominations, the NS Lighthouse Preservation Society (NSLPS) worked with heritage groups and community organizations and nominated 92 lighthouses for Parks Canada's consideration. The intent in nominating the lighthouses was to ensure they would be considered by Parks Canada for designation while giving the NSLPS time to work with communities to survey local interest and support for retention and future use. DFO's recommended deadline for submission of business plans was June 1, 2013. Business plans may still be submitted after this date, although it means that a written transfer agreement may not be developed in time to have the lighthouse designated as a heritage lighthouse under the Act (the May 29, 2015 date noted above).

Fifteen of the nominated lighthouses are located in Halifax (see Map 1):

Indian Harbour (Paddy's Head) Peggy's Point (Peggy's Cove) Betty Island Terence Bay Chebucto Head Maugher's Beach (MacNab's Island) George's Island Devil's Island

Pennant Harbour
Sambro Harbour (Bull Point)
Sambro Island

Spry Bay Harbour Sheet Harbour Passage Front Range Sheet Harbour Passage Rear Range Beaver Island

Only two community groups have submitted business plans: the Friends of Paddy's Head Lighthouse Society (for the Indian Harbour light) and the Terence Bay Lighthouse Committee (for Terence Bay). In addition, two business plans have been submitted by Provincial Government agencies: the Department of Economic and Rural Development and Tourism (NSERDT) for Peggy's Cove and the Waterfront Development Corporation Limited (WDCL) for the George's Island light.

Multiple groups in the past few years have approached HRM to ask for financial assistance for a particular lighthouse, or to ask that HRM take ownership of a lighthouse. One of these requests came from the federal government, which offered to sell the Indian Harbour lighthouse to HRM for \$1. A report went to Council in August 2012 (Attachment A) which looked at the lighthouse's potential for public use, barriers to public access, and heritage value. The report concluded that there was no business case to be made for acquiring the lighthouse at that time.

DISCUSSION

Current HRM Scenario

Currently HRM does not have any policy on heritage lighthouse preservation specifically. The Regional Plan does speak strongly to the importance of conserving heritage resources for both cultural and economic reasons. Lighthouses have an inherent historical and cultural significance, given the maritime heritage of the city, the region, and the province. Lighthouses may also act as tourism magnets, and are often used in marketing places as tourist destinations. Advances in technology may have lessened their traditional role as navigation aids (hence the current divestiture process), but they continue to have an important role in maintaining and developing the tourism industry, which in Nova Scotia is worth over \$2 billion annually.

HRM currently has no Business Unit whose mandate includes tourism. Tourism-related work is undertaken by Destination Halifax in the form of destination marketing.

Organizations seeking HRM funding support for lighthouses may apply to the same three avenues as non-profit organizations: the **Property Tax Relief** as per the Tax Relief for Non-Profit Organizations Administrative Order (2014); the **Less than Market Value Sale or Lease** (should HRM acquire the properties); and the **Community Grants Program**. Grants can include:

- Capital grant towards purchase of property, including an abutting property or easement for public access. A grant towards the purchase of a lighthouse would be moot in the case of heritage lighthouse divestiture where DFO would convey the property to a non-profit group for a nominal \$1 fee. Capital grants for leased properties is ineligible.
- Grants towards professional fees associated with acquisition such as site survey, legal fees, environmental testing, a building condition assessment, building lifecycle plan or conservation plan.
- Environmental remediation, site grading or enhancement.
- Professional fees for marketing plan, financial plan, etc.
- Structural repairs (where the non-profit group owns the property)
- Interpretation panels, site furnishings (non-fixed if lease lands), directional signs, publications, web-sites, etc.

In the past the Nova Scotia Lighthouse Preservation Society has asked if HRM can assist financially or

take ownership of individual lighthouses. In 2003 and 2007 the NSLPS received grants totaling \$7000 for an oral history project to document the lives of lighthouse keepers and their families, but to date there have been no other grants made for lighthouse-related matters.

There are a number of factors to consider for any group or organization interested in taking ownership of one or more lighthouses. The cultural and community value of a lighthouse must be weighed against the costs involved with maintenance, access and environmental clean-up. Each of these issues is outlined below.

Environmental Remediation Costs

Lighthouse sites are often contaminated with lead based paint, mercury once used to rotate lights, diesel fuel from generators, and mould on building interiors. The cost of cleaning this up can be quite high, particularly if the lighthouse is in a remote location. For example, the cost for the recently completed environmental remediation at the Betty Island light was about \$120,000. Under the Federal Contaminated Sites Action Program (FCSAP), many lighthouse sites have had sampling, remediation plans, risk assessment plans, and cost estimates prepared and, in some cases, remediation work has been completed.

Costs can range from \$15,000-25,000 for remediation assessments; \$40,000-\$100,000 for soil remediation; and \$40,000-\$100,000 for painting/scraping, depending on the size of the lighthouse and the remoteness of the location. In the two cases where community-based business plans have been submitted (Indian Harbour and Terence Bay), remediation work has already been completed by DFO, although this will not necessarily be the case for each divested lighthouse. The work at Terence Bay cost approximately \$59,000. A chart showing the current status of remediation work (and some known costs) for all the nominated lighthouses in HRM, based on information obtained from DFO, is shown in Attachment B.

Erosion can also be a significant issue. In the case of Maugher's Beach lighthouse, the breakwater that protects the beach and spit leading to the lighthouse was reconstructed in 1987 but was breached in 2003 by Hurricane Juan and again a couple of years ago. DFO has commissioned engineering studies to estimate the methodology and cost of repair. This issue would require due diligence on the part of any new owner.

Building Condition and Maintenance

Many surplus lighthouses have not been consistently maintained and the official position of DFO is that they will not be repaired prior to any transfer of ownership. The department does have access to a \$1 million fund to enable grants for repair to be made following divestiture, on a case by case basis. However, that fund would apply to all heritage lighthouse divestitures across Canada.

In a few cases, some repair work has been done. For example, both the Sambro Island and Maugher's Beach lights were repainted several years ago, although only after public pressure to do so. The Devil's Island light was re-sheathed in plywood and re-clad with wooden clapboards about twenty years ago

Broadly speaking, the surplus lighthouses in HRM can be divided into two groups – the smaller, tapered wooden "pepper pot" structures, such as Terence Bay and Paddy's Head, and the larger concrete structures such as George's Island and Maugher's Beach. The construction material of a lighthouse (concrete or wooden) impacts the estimated remediation cost:

• The business plan submitted for the Terence Bay lighthouse includes three cost estimates that give an indication of the level of investment that might be needed for any of the smaller wooden lighthouses: 1) preparation of a professional conservation plan (\$7,590); 2) minimum repair for weather protection (\$24,000); and 3) more comprehensive repair and restoration (\$85,000). This

- 4 -

totals \$116,590.

• The estimated cost of remediation and other repairs at Peggy's Cove (\$200,000-250,000) gives an indication of the costs that might be anticipated for the other concrete lighthouses.

Sambro Island is a special case, given its age, and its unique construction as an underlying stone tower clad in wooden shingles. Full repair and restoration costs for this type of structure have not been estimated.

Any new owner would need to undertake due diligence and be sure of the estimated cost of repairs before agreeing to take ownership of any divested lighthouses.

Accessibility

Ongoing public access is a condition of the federal government to approve a business case and transfer a lighthouse. Of the fifteen lighthouses under consideration, only one - Peggy's Point - has easy, well established public access from a public road. Six are on islands: three (Betty, Sambro, and Beaver) in remote offshore locations and three (George's, Maugher's Beach/ MacNab's, and Devil's) on the inner part of Halifax Harbour, all with access only by private boat or charter.

The remaining eight lighthouses are on the mainland at the entrances to small harbours and have deeded rights-of-way (for the Crown) across neighbouring properties. In some cases the right-of-way is specifically limited to government employees for access to the lighthouse; in other cases, the right-of-way is more generally worded - to the Queen, her servants, her heirs and assigns, and their heirs and assigns, etc. In all cases, the question exists as to whether, in the event of property transfer to a municipality or community group, these rights-of-way would comprise dedicated access for the general public. The circumstances vary and the answer in any given case is unclear. From DFO's perspective, these are questions that would need to be sorted out by lawyers prior to or at the time of divestiture.

Liability

If HRM were to acquire any of the lighthouse properties they would be covered by the municipality's existing public liability insurance. If the property were to be leased to a non-profit organization, then that group would also need to have its own liability insurance. The property would also need to be assessed for tax unless covered under a facility management agreement.

Historical Significance, Heritage Value, Landmark Value

Profiles of each lighthouse are included in Attachment C, describing their history, architecture, location and accessibility, and any interest that has been expressed regarding potential acquisition by community groups or other government bodies.

Sambro Island is arguably the most historically significant lighthouse in HRM. It is the oldest operating lighthouse in the Americas (North and South) and in 1937 received a National Historic Sites and Monuments Board designation as a National Historic Event (for its construction). Although this does not have quite the same status as a National Historic <u>Site</u>, it is very close to it. If Sambro Island was designated as a National Historic Site, it could potentially qualify for funding under the National Historic Sites Cost Sharing Program.

In October 2013, Council approved a motion to send a letter to the Parks Canada Minister asking the federal organization to designate the Sambro Island lighthouse under the Heritage Lighthouse Protection Act, in recognition of its historical significance, and requesting that Parks Canada take over responsibility for the Sambro light. In February 2014 a response was received from the Minister for Parks Canada, stating that the Agency does not plan to acquire additional lighthouses and directing HRM to the DFO divestiture process.

Parks Canada has also stated that it "has no operational or program requirement to acquire any more lighthouses, and that its role under the Lighthouse Protection Act is to oversee the transfer of surplus lighthouses to community groups".

Jurisdictional Scan - Best Practices

In 2011, as part of its lighthouse divestment strategy, DFO commissioned a study which examined the conditions under which surplus lighthouses can be redeveloped for viable alternate uses, particularly those which will permit ongoing public access to the sites. The study found that where lighthouses are sold to municipalities, the most common and successful examples are where the project involves a partnership with a community group that is capable of, and committed to, the ongoing operation and upkeep of the lighthouse in whatever alternate use it is converted to, e.g. museum, interpretive centre, gift shop, etc. In this model, a municipality would take ownership of the lighthouse and then lease it to the non-profit community group to operate the business venture. The study rated this type of ownership/management model as having the highest importance in a list of key success factors. It should be noted that there could be tax implications in this type of scenario, in terms of eligibility for a grant or the municipality's ability to provide tax relief to a commercial venture.

As noted above, only two community groups in HRM have expressed active interest in acquiring a lighthouse by submitting business plans to DFO - the Friends of Paddy's Head Lighthouse Society (Indian Harbour) and the Terence Bay Lighthouse Committee. The Paddy's Head proposal is that DFO would continue to own the property and the society would secure a "licence to access" for the purpose of fixing up and maintaining the lighthouse. At Terence Bay, the Lighthouse Committee proposes to take direct ownership of the property for a similar purpose of restoration and maintenance for public enjoyment, with no intent to open the lighthouse for commercial use. In neither case do the plans envisage municipal ownership.

The Nova Scotia government does not have any programs dedicated to lighthouse preservation or maintenance specifically. Such applications would go through general grant programs. In some cases the Departments of Economic & Rural Development & Tourism (NSERDT) and Communities, Culture & Heritage (CCH) have worked with interested community groups by providing advice on developing business cases and issues to consider in taking over a lighthouse. CCH has recently provided a grant to the Sambro Island Lighthouse Heritage Society to prepare a best practices study and business plan for the Sambro Island Light.

The Province has also been working with the Federal government to have the Peggy's Cove lighthouse designated and ownership transferred to Provincial jurisdiction, given its iconic status in Nova Scotia, and has submitted a business plan to DFO. In addition, the Waterfront Development Corporation Limited (WDCL) has submitted a plan to acquire the George's Island lighthouse and keeper's house as a strategic step towards developing the tourism and economic potential of George's Island.

HRM is aware of two other coastal provinces that have also investigated alternate uses. British Columbia and Newfoundland & Labrador both support the re-use of lighthouses that serve as business ventures (restaurants, bed-and-breakfast establishments), rather than as museums or other non-profit uses that might create a need for ongoing provincial or local government support for operations. The province of British Columbia offers support to community groups in developing project proposals that align with provincial priorities related to tourism development.

Options for HRM

There are significant environmental, maintenance, accessibility and liability challenges associated with ongoing oversight of lighthouses. The foregoing discussion suggests two options for Council's consideration:

1. Continue to support local non-profit lighthouse preservation groups on a case-by-case basis, through the Community Grants Program.

As previously noted, this avenue of municipal support presently exists and could potentially assist active groups such the Terence Bay or Indian Harbour lighthouse groups with such things as:

- Structural repairs (where a non-profit group owns the property);
- Grants towards professional fees associated with site survey, legal fees, environmental testing, environmental remediation, site grading or enhancement;
- Professional fees for conservation report, building lifecycle plan/marketing plan, etc;
- Interpretation panels, site furnishings, directional signs, publications, web-sites, etc.
- 2. Work collaboratively on any potential proposal received from the Province and cultural/tourism agencies to develop tourism potential of Halifax-region lighthouses, on a case by case basis.

The strategic move of the WDCL to acquire the George's Island light and work towards developing its long-term tourism and economic potential suggests that there may be a case for a broader intergovernmental or inter-agency dialogue to consider the tourism and economic potential Halifax-area lighthouses.

Agencies with a potential interest (within their own mandates) could include WDCL, NS Department of Communities, Culture & Heritage, NS Department of Natural Resources, Maritime Museum of the Atlantic, Halifax Port Authority and Destination Halifax, as well as the Nova Scotia Lighthouse Preservation Society, Sambro Island Lighthouse Heritage Society, Chebucto Head Lighthouse Society, Friends of MacNab's Island, Devil's Island Light Society, and the Fishermen's Cove Development Association.

If these agencies approach HRM with a request to partner, staff could undertake discussion to explore their level of interest in collaboration and the role that HRM might play. Council direction would be sought on a case-by-case basis. It should be noted that the discussions HRM held with NSERDT during the preparation of this report, indicated the Province viewed its role as providing advice and support to organizations interested in acquiring lighthouses, rather than taking a direct ownership role. HRM's issues around staff expertise and resources would also have to be addressed should this option be pursued.

FINANCIAL IMPLICATIONS

None at this time. The ability to support non-profit lighthouse preservation groups presently exists through the Community Grants Program budget. Staff time devoted to exploratory discussions with the Province would be covered through existing departmental operating budgets.

COMMUNITY ENGAGEMENT

Discussions held with federal and provincial government representatives, Destination Halifax, the Nova Scotia Lighthouse Preservation Society, Friends of Paddy's Head Lighthouse Society, Terence Bay Lighthouse Committee, Chebucto Head Lighthouse Society, and Friends of MacNab's Island.

ATTACHMENTS

- Map 1: Map of Nominated Surplus Lighthouses in HRM
- Attachment A: August 14, 2012 Council Report: Land Acquisition PID 40036360, Indian Harbour Lighthouse

- Attachment B: List of current lighthouse condition and remediation work
- Attachment C: Summary Chart

A copy of this report can be obtained online at http://www.halifax.ca/council/agendasc/cagenda.php then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by:	Anne Totten, Corporate Policy Analyst, 490-5623
	Bill Plaskett, Heritage Planner, 490-4663
Report Approved by:	oped
	Jane Fraser, Director, Planning & Infrastructure
Report Approved by:	inal
	Brad Anguish, Director, Community & Recreation Services, 490-4933
Report Approved by:	One
,	Maggie MacDonald, A/Director, Government Relations & External Affairs





P.O. Box 1749 Halifax, Nova Scotia B3J 3A5 Canada

> Item No. 1 Halifax Regional Council August 14, 2012

TO:	Mayor Kelly and Members of Halifax Regional Council
SUBMITTED BY:	Original Signed by Acting Director
SUDWITTED DT.	Peter Stickings, Acting Director, Planning & Infrastructure
DATE:	August 3, 2012
SUBJECT:	Land Acquisition PID 40036360, Indian Harbour Lighthouse

INFORMATION REPORT

ORIGIN

This report originates with:

- a) An offer, dated March 7, 2012, from the Federal Department of Public Works and Government Services Canada (PWGSC) for HRM to acquire PID 40036360 - the Indian Harbour Lighthouse property located at the southern tip of Paddy's Head, Indian Harbour - as shown on Attachment "A"; and
- b) A Council request, dated April 17, 2012, for a staff report examining options relating to lands identified as PID 00514844, PID 00514638, and PID 40037749, adjacent to the Indian Harbour Lighthouse for its dedication to public use in order to access the property where the existing lighthouse is located.

BACKGROUND

Surplus Lighthouses

The Department of Fisheries and Oceans Canada (DFO) has declared numerous active lighthouse properties in Nova Scotia and across Canada surplus to its operational requirements and wishes to divest itself of those properties while retaining the right to continue operating the active lights located thereon. The Indian Harbour Lighthouse is one of these.¹

Public Works and Government Services Canada (PWGSC) manages property conveyances on behalf of other Federal Government Departments, and it is from PWGSC that the offer came to HRM to purchase the Indian Harbour property has come. Under PWGSC divestiture protocols, excess federal properties are circulated first to priority interests, which include municipalities, before being offered to private interests.

The Offer

The terms of the offer were as follows:

- The property must be used for a public purpose.
- The property would be sold to HRM for \$1.00 provided it is used for a public purpose.
- The offer includes a deeded right-of-way access across two adjacent parcels leading to Paddy's Head Road.
- The sale would be subject to the right of DFO to continue to operate and maintain the navigational light in the existing lighthouse, and to continue to have access thereto. This would be formalized in a written agreement.
- The sale would also obligate HRM to maintain the existing lighthouse structure in good condition to support navigational aids as required by Coastguard Canada.
- The offer originally expired on April 7, 2012, but was extended to June 7, 2012.

Context: The Heritage Lighthouse Protection Act

The *Heritage Lighthouse Protection Act (HLPA)* was proclaimed on May 29, 2010, and enables the designation and protection of heritage lighthouses. Petitions could be submitted to Parks Canada nominating any lighthouse for designation and had to be submitted by May 29, 2012, following which Parks Canada will determine which nominations meet the established heritage designation criteria. For any nominated <u>surplus</u> lighthouse that meets designation criteria, a written commitment to buy or otherwise acquire the lighthouse and to protect its heritage character must be accepted by DFO prior to the designation. Potential owners must also submit a business plan to demonstrate their proposed use of the property, its economic viability, and their capacity to manage it.

By the May 29th deadline, thirteen of HRM's 19 surplus lighthouses were nominated for designation. These were Beaver Harbour, Betty Island, Chebucto Head, Devils Island, George's

¹ There are 186 lighthouses in Nova Scotia of which 119 have been declared surplus. Within HRM there are 24 lighthouses, of which 19 have been declared surplus. These are Beaver Harbour, Betty Island, Chebucto Head Devils Island (2 lights), Egg Island, George's Island, Indian Harbour, Jeddore Rock, MacNab's Island (2), Peggy's Point, Sambro Harbour, Sambro Island, Sheet Harbour (2), Spry Bay (2), and Terence Bay.

Island, MacNab's Island, Peggy's Point, Pennant Harbour, Sambro Harbour, Sambro Island, Sheet Harbour, Spry Bay, and Terence Bay. <u>The Indian Harbour lighthouse was not nomiinated.</u> **DISCUSSION**

Low Potential for Public Use and Community Involvement

In 2011, as part of its lighthouse divestment strategy, DFO commissioned a study examining the conditions under which surplus lighthouses can be redeveloped for viable alternate uses, particularly those which will permit ongoing public access to the sites.² The study found that where lighthouses are sold to municipalities, the most common and successful examples are where the project involves a partnership with a community group or non-profit organization that is capable of, and committed to, the ongoing operation and upkeep of the lighthouse in whatever alternate use it is converted to, e.g. museum, interpretive centre, eco-tourism facility, gift shop, etc. The study identified this type of ownership/management model as having the highest importance in a list of Key Success Factors.

In the case of Indian Harbour, there does not appear to be a community group which is actively interested in redeveloping the surplus lighthouse for public use. Some ten years ago, there was an informal (non-incorporated) organization called the Paddy's Head Lighthouse Preservation Society which attempted to rally community support for the idea; however, this effort foundered over concerns about encouraging public access over the Paddy's Head Road - which in the last 1200 feet leading to the lighthouse is a private road - and fears of disturbance to neighbouring properties. Since then, interest in the Society has faded away.³

Barriers to Public Access

The study also ranked accessibility very high as a Key Success Factor in developing a viable alternate use for surplus lighthouses. In the case of Indian Harbour, achieving full public access would be problematic because the Paddy's Head Road is not a public road.

The 1902 deed to the lighthouse property included a right-of-way across two adjacent properties (see Attachments A & B) to provide access from the lighthouse to the Paddy's Head Road, which at that time appears to have been regarded as public. However, the last section of Paddy's Head Road is in fact not a public road. It crosses eight other properties before it connects with the public road at the causeway that joins Paddy's Head Island with the mainland. This creates barriers to full public use of the road for access to the lighthouse. In addition, the lighthouse right-of-way across the two adjacent properties was never developed as an access road and is currently in a form of a path along the shore. At the moment this is the only access to the lighthouse. The two properties have since been divided into four (see PIDs 00514638, 00514844, 40037731 and 40037749 on Attachment B) and this further complicates the issue of public access.

Heritage Value

² Alternate Use Study Surplus Lighthouses, Canada, March 2011 <u>http://www.dfo-mpo.gc.ca/rp-bi/lh-ph-eng.htm</u>

³ Conversations with Barry MacDonald, President, Nova Scotia Lighthouse Preservation Society and Doug Bamford, Paddy's Head Lighthouse Preservation Society.

In 2002, the Federal Heritage Buildings Review Office (FHBRO) prepared a Benchmark Report evaluating the historical, architectural, and environmental value of the Indian Harbour Lighthouse (see Attachment C) and found that it did not score high enough to warrant recommendation for designation as a Federal Heritage Building. The report does note that the lighthouse has considerable merit in terms of both its aesthetic design and its landscape setting and, as such, may be regarded as having local heritage value. However, it does not appear that there is currently sufficient interest at the local level to designate, protect, or acquire the lighthouse for public use.

Conclusion

Given the above, staff concluded that there is no business case to be made for HRM to acquire the Indian Harbour Lighthouse or the adjacent properties at this time.

BUDGET IMPLICATIONS

None

FINANCIAL MANAGEMENT POLICIES/BUSINESS PLAN

This report complies with the Municipality's Multi-Year Financial Strategy, the approved Operating, Project and Reserve budgets, policies and procedures regarding withdrawals from the utilization of Project and Operating reserves, as well as any relevant legislation.

COMMUNITY ENGAGEMENT

In preparing this report, staff contacted representative of the Nova Scotia Lighthouse Preservation Society and the (inactive) Paddy's Head Lighthouse Preservation Society.

ATTACHMENTS

Attachment A:	Deed Description, Site Plan and Photographs
Attachment B:	Site Context
Attachment C:	Federal Heritage Building Review Office Benchmark Report 01-79

A copy of this report can be obtained online at http://www.halifax.ca/council/agendasc/cagenda.html then choose the appropriate meeting date, or by contacting the Office of the Municipal Clerk at 490-4210, or Fax 490-4208.

Report Prepared by:	Bill Plaskett, Heritage Planner, 490-4663 & Jan Skora, Co-ordinator Real Property Planning, 490-6783
Report Approved by:	Peter Bigelow, Manager, Real Property Planning, Real Estate, P&I 490-6047
Report Approved by:	Austin French, Planning Manager, Planning & Infrastructure 490-6717
	<u> </u>

PADDYS HEAD LIGHTHOUSE INFORMATION REPORT

ATTACHMENT "A" DEED DESCRIPTION, SITE PLAN AND PHOTOS



ATTACHMENT B

CONTEXT



ATTACHMENT C

FEDERAL HERITAGE BUILDING REVIEW OFFICE BENCHMARK REPORT 01-79

(Excluding illustrations due to poor original print quality)

FEDERAL HERITAGE BUILDINGS REVIEW OFFICE

BENCHMARK REPORT: 01-79

TITLE: Indian Harbour Lighthouse, Paddy's Head Island, St. Margaret's Bay, Nova Scotia

SOURCE: Alexandra Mosquin, Historical Services Branch

The Department of Fisheries and Oceans (DFO) has submitted Indian Harbour Lighthouse (Atlantic List of Lights # 482) on Paddy's Head Island, in the Regional Municipality of Halifax, Nova Scotia, for review by the Federal Heritage Buildings Review Office. The lighthouse is known as Paddy's Head lighthouse. Located at the southeastern tip of this bridge-accessed island at the mouth of St. Margaret's Bay, this 1901 lighthouse is in the form of a small, square-tapered tower with a square light (Figures 1-7). DFO intends to dispose of this lighthouse and a local lighthouse preservation society has expressed strong interest in acquiring the building.

HISTORICAL ASSOCIATIONS

Thematic

The primary theme associated with lighthouses is their importance as an aid to navigation. In the early years of settlement and of the economic development of Canada's resources, the dominance of water transportation made safe navigation a priority. Subsequent governments constructed lighthouses along Canada's ocean coastlines, interior rivers and lakes to provide assistance to mariners, from the late 18th century through to the 1950s.

The Indian Harbour Lighthouse was constructed in 1901. The lighthouse's purpose was to guide small vessels seeking an entrance into Indian Harbour through the channel between Paddy's Head Island and Wreck Island. Several shipwrecks in the late 19th century provided a catalyst for its construction. First lit on May 20, 1901, it was electrified in 1955, and continues at present to provide a light for mariners. The lens is the original 5th Order Fresnel drum lens, an apparatus traditionally used for harbour lights.¹

Person/Event

No person or event of historical significance has been identified with this lighthouse.

¹ Chris Mills, author of Vanishing Lights, in correspondence with Doug Bamford of the Paddy's Head Lighthouse Preservation Society, n.d.

Local Development

The Indian Harbour lighthouse was constructed in 1901. No particular turning point has been found in the community's history that can be associated with the construction of the lighthouse although the construction of a lighthouse permitted residents to safely access the harbour and fish for most of the 20th century.

The Indian Harbour area was seasonally used by the Mi'kmaq before permanent settlement began approximately two hundred years ago. This isolated coastal community developed as a small fishing village. Travel to other villages was by small footpaths on land or by water. In 1901 the federal government purchased one and a half acres of land at the southeastern point of Paddy's Head Island for a lighthouse "as a guide to small vessels seeking an entrance to Indian Harbour through the channel between the southern extremity of Paddy's Head Island and Wreck Island."² The small vessels belonged to local fishermen. Fishing remained a part of the local economy throughout the 20th century. Because Peggy's Cove is less than two kilometres away, tourist pressure has encouraged residents to run bed and breakfasts and motels.

ARCHITECTURE

Aesthetic Design

The Indian Harbour lighthouse is a small and simple, white, square-tapered tower, 35 feet in height, mounted 10 feet above the high water mark. Its distinguishing feature is its square red lantern, which retains its shingle siding (Figures 1-4). Recently the 1960s exterior siding on the frame of the building was removed and replaced with much narrower boards (Figures 12-13). This may have improved the visual quality of the lighthouse as the narrower siding helps better articulate the small flare at the cornice and is more in keeping with the original cladding used on lighthouses of this time.

Square-tapered towers have been a standard Canadian lighthouse design from the 1840s through to the 1950s. As an economical alternative to stone and concrete, these small wooden structures were easy to erect at less strategic locations, and move if necessary. Seven forms of these towers have been differentiated by Phemister and Fulton in their 1990 report on this building type. Indian Harbour belongs to the second category of light tower which is characterized by a flared or coved cornice tower. Of the 62 light towers which Phemister and Fulton evaluated, 22 belonged to this category making this the largest group in their study.³ Although a commonly used design, clear differences exist in its elaboration which affect the visual qualities of each tower. The treatment of the cornice, proportions between the lantern gallery and the tower, and the degree of taper in the body of the tower, may contribute to the strength of the design.

2

² Government of Canada, Sessional Paper no. 21, Report of the Department of Marine and Fisheries, 1901 (Ottawa: King's Printer, 1902), p. 59.

³ Gordon Fulton and Martha Phemister, "Square Tapered Wooden Towers," FHBRO, December 1990, n.p.

Similar lighthouses built at the same time can be compared to the one at Indian Harbour. In excellent condition, the Cocagne front range light is virtually identical to Indian Harbour in its size, proportions, and the extent of its vertical taper. The flare at its cornice is perhaps slightly more pronounced and its details are emphasized through the use of contrasting paint (Figure 8).⁴ The Five Islands lighthouse in Colchester Country, Nova Scotia is slightly smaller than Indian Harbour making it more squat in its proportions. Because it is raised on piers, its possesses a weaker visual relationship with its site (Figure 9).⁵ Another highly similar lighthouse can be found at Bass River, in Nova Scotia. From the treatment of the lantern to the curve of the cornice, to the details at the entrance, this lighthouse possesses near identical visual qualities with Indian Harbour (Figure 10).⁶ And lastly, the Caraquet front range light tower, in Caraquet, New Brunswick still exhibits its original siding and corner boards, suggesting the appearance of the Indian Head light tower before the exterior was reclad (Figure 11).⁷

These highly similar lighthouses have received different scores. Although Indian Harbour lighthouse possesses a flared cornice that is slightly less flared than most, and this may be perceived as a weakness, it bears the strongest resemblance to Bass River, and for the purpose of this benchmark, may be considered its equivalent.

Functional Design

Inside the lighthouse, a staircase provides access to a landing, which connects to a steep stair case leading to the gallery platform (Figure 14). This is a straightforward interior plan typical of many tapered towers.

The structure possesses a balloon frame construction typical to turn-of-the-century lighthouses.

According to the Lighthouse Preservation Society, the lighthouse possesses one of the only lights in the region that still has its original Fresnel drum lens manufactured by Barbier, Renard, et Turenne in France. Even after electrification, it has continued to be used, and is still a functioning lighthouse.

⁴ Fulton and Phemister, FHBRO Benchmark 90-123, Cocagne front range light, Cocagne, New Brunswick, Score: 34 (0/0/4, 0/5/4/2, 6/8/5) Not heritage.

⁵ Fulton and Phemister, Five Islands Lighttower, FHBRO 90-100, Score: 43 (0/0/4, 9/5/4/,2 6/8/5) Not heritage.

⁶ Fulton and Phemister, FHBRO 90-101, Bass River Lighthouse, Score: 48 (5/0/4, 9/5/4/2, 6/8/5) Not heritage.

⁷ Fulton and Phemister, FHBRO 90-126, Caraquet Front Range Lighthouse, Score: 29 (0/0/4, 0/5/4/2, 6/8/0) Not heritage.

Landmark

Indian Harbour lighthouse is visible in the distance from many vantage points around the land of the harbour. Because it is situated on a bare rocky point, it prominently marks the entrance to the harbour from the bay. The Paddy's Head Lighthouse Preservation Society was formed to preserve and protect this lighthouse and the surrounding land. Tourists view this lighthouse, as it is on the road to Peggy's Cove, and find it provides a contrast with the "highly trafficked Peggy's light." However, although efforts are being made to enhance the community profile of Indian Harbour lighthouse, at present it is not known throughout Halifax or in the region and may be considered conspicuous or familiar only at the neighbourhood level.¹¹ It is not included in a recent guide of lighthouses for the Atlantic region.¹²

¹² See, for example, Courtney Thompson, *Lighthouses of Atlantic Canada* (Mt. Desert, Maine: Catnap Publications, 2000).



¹¹ Bamford interview, Telephone interview with Marie Elwood, Resident of Indian Harbour and Former Chief Curator of the History Division of the Nova Scotia Museum and Research Associate at the Canadian Museum of Civilization, 13 September 2002.

ATTACHMENT B CURRENT STATUS OF REMEDIATION WORK ON NOMINATED LIGHTHOUSES IN HRM March 2014

Lighthouse Remediation Process

Site remediation is carried out using a process mandated by the Federal Contaminated Sites Program (FCSAP), summarized a s follows:

Phase I ESA- mainly a historical review/site visit to determine if there are any potential areas of environmental concern.

Phase II ESA- Sample the site (soil, groundwater, paint, etc.) to determine the presence/absence of contaminants.

Phase III ESA- completed if the Phase II ESA has identified the presence of contaminants. The Phase III ESA determines the area/volume of the impacted area.

Risk Assessment- once a site has had a Phase III ESA, we will complete a risk assessment to determine if the impacts actually pose a risk to human or ecological health based on DFO's current Federal use of the site. If the risk assessment determines there is no risk, we do not proceed with remediation. If risk assessment identifies risk then the site will be put forward for remediation/risk management. Most of our light sites are impacted with metals (as a result of the historic use of lead based paint) and we usually address the impacts via the removal of any exterior lead based paint and an onsite soil capping method.

Lighthouse Remediation Costs (rough estimates)

Risk Management (Soil Impacts)

- Capping Under 50m2 \$40K
- · Capping 50m2 100m2 \$50K
- · Capping 100m2 to 200m2 \$65K
- Increase by \$20K for every additional 100m2 beyond 200m2
- 10-20% increase for capping at remote sites
- recognized slight efficiencies for paired sites (Front and Rear)
- Environmental Risk Assessment (ERA) \$15K
- Human Health Environmental Risk Assessment (HHERA) \$20K
- HHERA with ERA \$25K

Painting/Scraping Lights

Major Light:	\$80K	\$100K if remote
Minor Light:	\$40K	\$50K if remote

LIGHTHOUSE	CONTAMINANT TYPE(S) IS TESTING AND REMEDIATION PLANNING COMPLETE?	ACTION REQUIRED	REMEDIATION COMPLETED? TOTAL COST?
Indian Harbour	2000 Phase I Environmental Site Assessment (ESA), 2001 Phase II ESA, 2003 Risk Assessment completed for the site. Environmental site assessments identified metals (lead, zinc and mercury) in soils surrounding the lighthouse which exceeded guidelines. Lead based paint (considered lead leachate toxic identified on the interior and exterior of the light). The 2003 risk assessment identified that soil remediation was not required and no further work was planned for the site.	No further action required by DFO. Depending on the intended use of this property, recipient may require further analysis.	No, not required for current federal use of site.
Peggy's Point	2000 Phase I ESA, 2001 Phase II ESA, 2004 Human Health Risk Assessment (HHRA) and 2013 Risk Management Plan. Metals in soil identified in isolated pockets of soil in bedrock outcroppings. Risk Assessment identified that soil remediation was not required. Mercury vapour identified on third floor of lighthouse- does not pose a risk provided no visible droplets of mercury but pregnant women and sensitive individual should not enter. Lead based paint identified in interior of light. Mould identified on first floor interior walls. Risk management plan details ways to manage these issues.	N/A	No.
Betty Island	2004 Phase I/II/III ESA, 2008 Risk Assessment and 2013 Additional Phase III ESA and Risk Assessment were completed for the site. Assessments identified metals and mercury impacted soil in area of the existing light tower and former buildings. PAH (polycyclic aromatic hydrocarbon) soil impacts identified near former transformer area. Petroleum hydrocarbon impacts identified in soil south of former fuel tank. 2013 risk assessment indicates that there is a requirement for soil risk management at the site. Based on the risk assessment, 84 m3 of impacted soil requires remediation.	Remediation completed based on the current DFO use of the site. Soil remediation project was completed in 2013-14 and involved removal of impacted soil and capping with clean soil within former building foundation.	Yes. (In the order of \$120,000) Total site remediation costs to be reported to Federal Contaminated Sites Inventory by Apr. 25/14.

LIGHTHOUSE	CONTAMINANT TYPE(S)	ACTION REQUIRED /	REMEDIATION COMPLETED?
	IS TESTING AND REMEDIATION PLANNING COMPLETE?	ESTIMATED COST	TOTAL COST?
Terence Bay	1999 Phase I ESA, 2003 Phase II/III ESA, 2005 Human Health Risk Assessment was completed for the site. Assessments identified soil near the light impacted with metals from paint on the light	Remediation completed based on the current DFO use	YES, based on current federal use of site.
	structure. Soil remediation (around drip line of tower) and lead based paint removal was completed in 2008-09.	of the site. Soil remediation (around drip line of tower) and lead based paint removal was completed in 2008- 09.	\$16,000 planning \$43,000 remediation
Pennant Harbour	1999 Phase I Environmental Site Assessment and 2010 Phase II ESA completed. Phase II ESA identified metals in soil exceeding the CCME Canadian Soil Quality Guidelines. Lead and Barium also exceed DFO's risk based Soil Screening Criteria (estimated volume of 30.3 m3). Risk Assessment recommended next step.	Approx \$12,000 so far on assessments No remediation costs spent to date.	No.
Sambro Harbour	2001 Enhanced Phase I Environmental Site Assessment, 2002 Phase II/III ESA completed. Assessments identified metals in soil exceeding the CCME Canadian Soil Quality Guidelines in the vicinity of the light. Estimated volume of metals impacts: 23m3. Localized benzene impacted soil also identified near the light (estimated 3m3). Risk Assessment next recommended step.	No remediation costs spent to date.	No.
Sambro Island Lighthouse area (see notes on	2001 Enhanced Phase I ESA, 2002 Phase II/III ESA and 2013 Phase III ESA/HHERA completed. Assessments identified metals impacted soil in the vicinity of the light and former buildings. The Risk Assessment concluded that risk management and/or remediation of lead impacts in soil is recommended to address the potential human health risk. Options for limiting this potential risk include:	Approx \$37,000 so far on assessments Cost for remediation for current DFO use of site has not yet	No.
Sambro Island dwelling area next page)	institutional control, removal, or soil cover. The extent of the area requiring risk management/remediation is approximately 120 m2. No ecological health risks were identified.	been determined.	

Sambro Island	Hazardous Materials Survey conducted in 2009 at the two former	Approx \$10.000 so	No
Dwelling areas	dwellings. Survey identified asbestos-containing materials, paint	far on assessments	
	with elevated metals concentrations, and miscellaneous hazardous		
	materials were identified in the		
	subject buildings. NOTE: one dwelling has since burned down.		
Chebucto Head	1997 Phase I ESA, 1998 Phase II/III ESA, 2001 Phase III ESA and a	No further action	No.
	2004 Human Health Risk Assessment were completed.	required by DFO.	
	Assessments identified metals and petroleum hydrocarbon	Depending on the	
	impacted soil in the vicinity of surrounding buildings and burn	intended use of this	
	area. Groundwater near the fog alarm building is impacted with	property, recipient	
	petroleum hydrocarbons. The HHRA indicated that there is no	may require further	
	requirement for soil risk management for the current Federal land	analysis.	
	use. Lead based paint also identified on the buildings.		
Maugher's Beach	2004 Phase I/II ESA, 2007 Human Health Risk Assessment	Remediation	Partial. Removal of flaking,
	completed. Assessments identified metals and mercury impacted	Completed based on	lead based exterior paint and
	soil in the vicinity of current and former buildings. Risk assessment	current DFO.	repainting completed in
	identified metals in soil may pose a risk to human health. Volume		2008-09.
	of soil exceeding requiring remediation is 118 m3. Point source for		
	metal contamination (lead based paint) was removed from exterior		Painting cost \$124,800.
	of light tower in 2008-09. It was not possible to remediate soil in		
	this area due to onsite conditions (below high water mark and		Soil remediation not possible
	would be impossible to re-establish a cap/vegetation in this area).		due to site conditions.
George's Island	2011 Phase I/II ESA completed. Metals impacted soil exceeding	Unknown. Further	No.
	the CCME res/park guidelines in the vicinity of the light and former	assessment	
	buildings. Further assessment for metals is recommended. No	recommended likely	
	petroleum hydrocarbon exceedances were found in the samples	followed by risk	
	collected in the area of the generator bldg, light and helipad.	assessment.	
	Estimated volume of impacted metals: 605 m3. Lead based paint		
	identified in the interior of the light.		

Devil's Island	1999 Phase I ESA, 2008 Phase II ESA and 2013 Human Health and	Remediation	Yes, in 2013-14.
	Ecological Risk Assessment completed. Assessments identified	completed based on	Total site remediation costs
	metals impacted soil in the vicinity of the light. Lead based paint	the current DFO use	to be reported to Federal
	also identified on exterior of light. Risk assessment identified that	of the site.	Contaminated Sites
	metals impacted soil may pose a risk to human health and soil risk		Inventory by Apr. 25/14.
	management/remediation is recommended. 2013- soil		
	remediation and exterior lead based paint removal was completed.		
Spry Bay Sector	2001 Enhanced Phase I ESA, 2010 Phase II ESA and a 2013 Human	Unknown. Risk	No.
	Health and Ecological Screening Level Risk Assessment have been	assessment next	
	completed for the site. Metal impacted soil was identified in the	recommended step.	
	vicinity of the sector light and helipad area. The risk screening		
	report concluded that arsenic, barium, cadmium, lead and zinc		
	concentrations in soil represent a potential risk to		
	human and ecological receptors. Management of the		
	soils through capping, removal and/or institutional control is		
	recommended to limit soil contact with human and ecological		
	receptors. A site specific risk assessment is recommended to refine		
	the risk management area.		

Sheet Harbour Front	2001 Phase I ESA, 2002 Phase II/III ESA and a 2013 Human Health and Ecological Risk Assessment have been completed for the site. ESA identified metals impacted soil in the vicinity of the range light. The risk assessment determined that the impacts may pose a risk to human health and soil remediation or risk management is recommended.	Cost for remediation for current DFO use of site has not yet been determined.	No.
Sheet Harbour Rear	2001 Phase I ESA, 2002 Phase II/III ESA and a 2013 Human Health and Ecological Risk Assessment have been completed for the site. ESA identified metals impacted soil in the vicinity of the range light. The risk assessment determined that the impacts do not pose a risk to human or ecological health and no further work is recommended for the site based on the current Federal use of the site.	No further action required by DFO. Depending on the intended use of this property, recipient may require further analysis.	No, not required for current federal use of site.

Beaver Island	2004 Phase I/II Environmental Site Assessment and a 2011 Human	No further action	No, not required for current
	Health and Ecological Risk Assessment have been completed for	required by DFO.	federal use of site.
	the site. Soil at the east end of the island where current and	Depending on the	
	former dwellings, light towers exist(ed) is impacted with metals	intended use of this	
	and petroleum hydrocarbons. Also, metals impacts in soil were	property, recipient	
	identified near ruins (former boathouse & other bldgs) at the west	may require further	
	end of the island. The risk assessment determined that the impacts	analysis.	
	do not pose a risk to human or ecological health and no further		
	work is recommended for the site based on the current Federal		
	use of the site.		

	LIGHTHOUSE	Original Light	Present Light	Architecture	Public Access Potential (Good/Fair/Poor)	Environmental Remediation planned or complete?	Community or Government Interest	Business Plan?
L	Indian Harbour	1901	1901	Tapered square wooden tower. Original structure.	Poor. No public r-o-w.	2003 risk assessment indicated remediation not required for current use.	Friends of Paddy's Head Lighthouse Society.	Yes
2	Peggy's Point	1868	1915	Octagonal concrete tower. Oldest of this type in HRM.	Good. No issues	Interior contaminants. Risk management plan completed 2013.	Province of N.S.	Yes
3	Betty Island	1875	1981	Tapered square wooden tower. Modern structure.	Poor Private boat only	Remediation completed 2013 for current use.	No	No
ļ	Terence Bay	1903	1903	Tapered square wooden tower. Original structure.	Fair (resolvable issues)	Remediation completed 2008-09 for current use.	Terence Bay Lighthouse Committee	Yes
5	Pennant Harbour	1903	1991	Modern structure	Fair	Contaminants identified. Risk assessment next step	No	No
5	Sambro Harbour	1899	1899	Tapered square wooden tower. Original structure. Oldest of this type in HRM.	Poor (adjacent owner permission or beach walk only)	Contaminants identified. Risk assessment next step	NSLPS (see below) and Sambro Island Lighthouse Heritage Society (SILPS)	No
7	Sambro (Island)	1758	1758	Octagonal granite tower clad in wood shingles. Original structure. Oldest operating light in North America.	Poor Private boat only.	Contaminants identified. Risk assessment next step	Nova Scotia Lighthouse Preservation Society (NSLPS) and SILPS.	No
;	Chebucto Head	1872	1967	Octagonal concrete tower. Relatively modern.	Fair. Gated road owned by Fed Govt. Access by foot only.	Contaminants identified. No further action req'd for DFO use but new use may need further analysis	Chebucto Head Lighthouse Society. Inactive.	No
	Maugher's Beach	1828	1941	Octagonal concrete tower.	Fair. Close to City. Occasional seasonal private ferry.	Lead paint on tower removed 2008 but soil cannot be remediated (below high water mark)	Friends of MacNab's Island and possible interest by WDCL	No
.0	George's Island	1876	1917	Octagonal concrete tower. Second oldest of this type in HRM after Peggy's Point)	Fair. Close to City. By boat, special arrangement only).	Contaminants identified. Further assessment needed followed by risk assessment.	Waterfront Development Corporation Limited (WDCL)	Yes
1	Devils Island SE	1877	1877	Octagonal wooden tower. Original structure. Second oldest lighthouse in HRM.	Poor. Private boat only.	Remediation completed 2013-14 for current use	Devil's Island Light Society. Inactive	No
2	Spry Bay Harbour (Front)	1916	1916	Tapered square wooden tower. Original structure.	Poor.	Contaminants identified. Risk assessment next step	No	No
3	Sheet Harbour Passage (Front)	1915	1915	Tapered square wooden tower. Original structure	Poor (adjacent owner permission)	Risk assessment complete Remediation next step	No	No
4	Sheet Harbour Passage (Rear)	1915	1915	Tapered square wooden tower. Original structure	Poor (adjacent owner permission)	Contaminants identified. No risk for DFO but new users may require further analysis.	No	No
5	Beaver Island	1846	1986	Circular fibreglass tower Modern structure	Poor (Private boat only)		No	No