



## STAFF REPORT ACTION REQUIRED

### Preservation Alternatives for the Former Canada Malting Complex

<b>Date:</b>	April 16, 2009
<b>To:</b>	Executive Committee
<b>From:</b>	Chief Corporate Officer
<b>Wards:</b>	Ward 20
<b>Reference Number:</b>	P:\2009\Internal Services\F&RE\Ec09028F&RE - (AFS 8014)

#### SUMMARY

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Facilities and Real Estate Division (F&RE) was directed by Executive Committee at its meeting of June 03, 2008, item EX21.1.10 to provide long-term options for the silos and structures of the former Canada Malting Complex in support of future development of this site and to facilitate public access to Ireland Park. The silo facilities are on the City's inventory list of heritage properties.

Trow Associates Inc. (Trow), the engineering consultant of record, has provided cost estimates on the five alternatives detailed in this report and summarized in table form in Appendix "A", which range in cost from \$7.65 Million to \$20.6 Million. The project budget included in the 2009 Capital Budget submission is \$12.2 Million, which incorporates an estimated \$3.8 Million repair to the east dock wall, resulting in \$8.4 Million for the site building structures. The east dock wall repairs are needed and common to all Alternatives presented.

The City's Heritage Preservation Services (HPS) prefers Alternative "B", to retain and restore all silos and demolish the buildings to the west at a total cost of about \$17.7 Million. This requires additional funding of approximately \$9.3 Million to be added to the approved project budget.

This report recommends Alternative "D", to demolish all silos and structures leaving only a symbolic outline representation of nine southern silos in a landscape setting at a cost of about \$8.4 Million. HPS is not in agreement with this recommendation.

## **RECOMMENDATIONS**

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### **The Chief Corporate Office recommends that:**

Alternative “D” be adopted to demolish all silos and structures leaving only a symbolic outline representation of nine southern silos in a landscape setting at an estimated cost of \$8.4 Million that is within the proposed 2009 F&RE Capital Budget.

### **Financial Impact**

The content of this report has no direct financial impact to the current year’s budget provided the recommended Preservation Alternative “D” is approved. Should Alternative’s “A”, “B” or “C” be approved additional funding will be required to implement the respective Alternative. The capital budget plan for this project is \$12.2 Million (\$3 Million in 2009 and \$9.2 Million in 2010); however, \$3.8 Million of this amount is required for the east dock wall repairs.

### **DECISION HISTORY**

The Executive Committee at its meeting of June 03, 2008, item EX21.1.10, recommended the Chief Corporate Officer submit a report to the September 2008, Executive Committee identifying the estimated expenditure and funding options to stabilize and/or make safe the 1928 and 1944 silos inclusive of access along the east sides of the silos. This report submission was postponed to the April 2009 Executive Committee Meeting to allow the City’s Heritage Preservation Services and the Toronto Preservation Board ample time to prepare a recommendation reports to Council regarding the Preservation Alternatives for the site.

### **ISSUE BACKGROUND**

The Canada Malting Complex (CMC) at 5 Eireann Quay (formally 5 Bathurst Street) currently resides under the City’s Facilities and Real Estate (F&RE) Division buildings portfolio. In 2007 F&RE commissioned Trow Associates Inc. (Trow) to perform a comprehensive Structural Condition Assessment of the facility for future use considerations.

The safety concerns from the deterioration of the structures required the site to be secured and public access to Ireland Park along the east elevation of the silo structures was restricted due to the structurally unsafe marine legs projecting from the east elevation of the silo structure. Presently, Ireland Park can only be accessed from the south pier at the foot of Eireann Quay. There has been increased requests from community to reopen the east walkway (along the east side of the silo structures) to access Ireland Park.

Based on the structural deteriorations and safety concerns identified in Trow’s 2007 report, F&RE put forth a recommendation to City Council to demolish all structures west of the silo units and to rehabilitate the silos. City Council deferred its decision since the City’s Economic Development Culture and Tourism (EDCT) Department was pursuing development of the site by independent parties to establish a Toronto Museum Project and was in the process of preparing a feasibility study. In addition, a response from

Heritage Preservation Services was also required since the site structures are on the City's inventory list of Heritage Properties. Heritage Preservation Services subsequently agreed to this scenario, presented herein as Alternative "B".

In order to mitigate further deterioration to the silo structures, address public safety and reopen the east walkway to Ireland Park, F&RE proceeded to focus specifically on remediation and selective demolition of the silos and structures.

In 2008 F&RE commissioned Trow to perform an Updated Structural Condition Survey on the site, focusing specifically on the silos, marine legs structures, the seawall located along the east property line and the seawall along the south end of Ireland Park.

The 2007 and 2008 Trow reports presented various options of remediation with corresponding cost estimates presented in the following section.

## **COMMENTS**

The following information and cost estimates were extracted, in whole or in part, from the initial Structural Condition Survey Report dated April 30, 2007 and an Updated Structural Condition Survey Summary Report dated July 29, 2008 both prepared by Trow Associates Inc.

Each of the following alternatives presented incorporates an estimated cost for performing required repairs within the first 10 years following any remediation performed. The repairs and associated costs for the east dock wall have not been identified in this report, since the dock wall is independent of the silo structures and common to all alternatives presented.

A summary table has been provided in Appendix "A" summarizing all of the alternatives and associated cost estimates presented in this report.

### **Alternative "A" – All Structures on the Site are Preserved**

This alternative was presented in the initial Structural Condition Survey Report and addresses only the restoration of the structures and their protection from the elements for the next ten years. This alternative assumes that the building and silo structures will be cleaned, repaired and all openings to the outside sealed to prevent water from entering the structures. Other tasks such as mechanical and electrical work, security of the site, landscaping, protection of the surrounding structures etc. are not identified in the tasks and cost estimates.

This alternative will involve, as a minimum, the following:

- Environmental abatement of hazardous materials within the facility;
- Removal of left over grain and standing water in silos;
- Selective demolition and removal of certain structural parts that are damaged/deteriorated beyond repair and/or in danger of falling or being blown off the structure by wind;
- Interior repairs and structural reinforcement as needed; and

- Repair outside surfaces of the silo and other building structures.

The original cost estimate for this alternative considered reinforcing selective structural steel connections, elements and surfaces within the Marine Leg and connection of the Marine Leg to the silos. The restoration of the Marine Legs was reviewed in greater detail in the Updated Structural Condition Survey Report and considers that most of the marine leg structure will be cleaned of lead paint, structurally repaired and re-secured in place along with the railway car sheds below the marine legs. The cost estimate from the latter report has been considered in the overall estimate.

The cost estimate for Alternative “A” is presented in the accompanying table:

<b>Alternative “A” – All Structures on the Site are Preserved</b>	<b>Estimated Cost</b>
<b>1. Cleanup, selective demolition and special removal</b>	\$4,100,000.00
<b>2. Restoration</b>	\$8,500,000.00
<b>3. Marine Leg Structure Restoration</b>	\$1,612,056.71
<b>4. Repairs required within first 10 years, including engineering fees after the structures are restored and preserved (20%)</b>	\$2,022,411.34
<b>5. Mobilization</b>	\$50,000.00
<b>6. Engineering Cost (10%)</b>	\$1,628,446.81
<b>7. Contingency (15%)</b>	\$2,686,937.23
<b>Total</b>	<b>\$20,599,852.09</b>

### **Alternative “B” – Remediation of the Silo Structures**

This alternative assumes that the 1928 and 1944 Germination/Kiln Units, the Work House and the Boiler Room (basically all structures west of the silos) are demolished and restoration of the remaining structures (the Silo’s, Head Houses and Marine Legs) is performed for long term heritage presence on the site.

The goal of the remediation of the silo structures is to clean the structures (from designated substances, standing water, debris, leftover grain, etc.), repair them so that further deterioration is stopped or limited and protect them from the elements. The suggested remediation and protection from the elements has been considered for the next ten years only. It has been assumed that their current use will not be changes and the structures will remain unheated. In order to achieve the described goal the following has been considered:

- Clean all debris from inside silo structures and perform all environmental abatement of designated substances as required.

- Repair source of water infiltration to the basement areas of the north and south silos.
- Detach the link structure from the silo structures and repair accordingly.
- Remove stairs and platforms on west side of North Silos so swing stage access can be achieved.
- Selective demolition and removal of certain structural parts that are damaged and deteriorated beyond repair and appropriate concrete wall repairs to interior and exterior wall areas.
- Remove existing roofing membrane and replace with new roofing system over silos.
- Remove existing windows and doors and seal with corrugated metal.
- Once silo walls are repaired apply an elastomeric coating for protection and uniform appearance.
- Installation of louvers in basements windows for adequately venting structures.

As part of the silo restoration, the marine leg structures will be restored. This will involve cleaning of lead paint, significant structural repairs and in-place re-securement along with the necessary repairs to the railway car sheds below the marine legs.

The cost estimate for Alternative “B” is presented in the accompanying table:

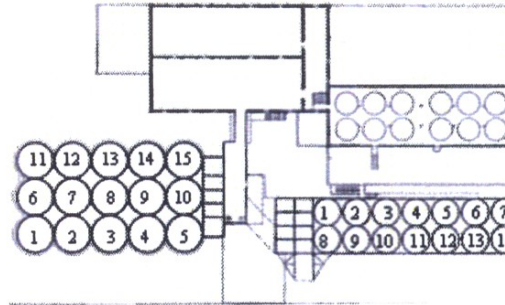
<b>Alternative “B” – Remediation of the North and South Silos</b>	<b>Estimated Cost</b>
<b>1. Clean-up, Selective Demolition and Special Removal</b>	\$5,000,000.00
<b>2. North Silos, South Silos and Head House</b>	\$5,862,011.08
<b>3. Marine Leg Structure Restoration</b>	\$1,612,056.71
<b>4. Repairs and monitoring required for first 10 years after the structures are restored and preserved.</b>	\$1,494,813.56
<b>5. Mobilization</b>	\$50,000.00
<b>6. Engineering Cost (10%)</b>	\$1,401,888.13
<b>7. Contingency (15%)</b>	\$2,313,115.42
<b>Total</b>	<b>\$17,733,884.91</b>

### **Alternative “C” – Preserving a Symbolic Representation of Silo’s**

The possibility of preserving part of the silo structures as a symbolic representation of its heritage significance was also explored. Trow was requested to consider, as an option, preserving the least number of silo’s that would be possible from a structural and cost effective perspective. Presently there are two silo structures (see diagram of silo

configuration below): the north structure that contains 14 silos in a rectangular cluster of two (2) silos wide by seven (7) silos long and the south structure that contains 15 silos in a rectangular cluster of three (3) silos wide by five (5) silos long. Trow’s report identified preserving a square cluster of the nine (9) south most silos (1, 2, 3, 6, 7, 8, 11, 12 and 13) adjacent to the Ireland Park.

**Diagram of Silo Configuration:**



To consider this option, the North Silo structure, the North and South Head Houses, the Marine Leg Structures and six of the south silos would have to be demolished. All the environmental clean-up and remediation with respect to designated substances, described in the prior sections, will have to be completed. In addition the inside of the structures would have to be cleaned from debris and left over grain.

In order to separate the south structure, the portion of the silos that is to remain will require significant stabilization, reinforcement and strengthening. The remaining structures will still require significant surface remediation and modifications.

The cost estimate for Alternative “C” is presented in the accompanying table:

<b>Alternative “C” - Preserving a Symbolic Representation of Silos</b>	<b>Estimated Cost</b>
<b>1. Demolition of North Silo’s, North Head House, South Head House, Portion of South Silos (6 Silos) and Marine Leg Structures</b>	\$8,260,000.00
<b>2. Remaining Silos – Remediation Repairs, Interior Cleanup and structural reinforcing.</b>	\$2,703,205.80
<b>3. Repairs and monitoring required for first 10 years after the structures are restored and preserved.</b>	\$540,641.16
<b>4. Mobilization</b>	\$50,000.00
<b>5. Engineering Cost (15%)</b>	\$1,733,077.04
<b>6. Contingency (15%)</b>	\$1,993,038.60
<b>Total</b>	<b>\$15,279,962.60</b>

## Alternative “D” – Preserving a Modified Tiered Symbolic Representation of Silos

Alternative “D” is presented as a modified version of Alternative “C” - Preserving a Symbolic Representation of Silos. This alternative considers the square cluster of nine silos identified in Alternative “C”; however, the majority of the silos will be demolished and a small portion of the silos will remain projecting above grade level. As a consideration, the silos can be tiered to extend 4 feet above grade level at its highest point, cascading down toward Ireland Park and allowing it to be accessible to the public. The top of the remaining portion of the silos could be transformed into platforms covered with sod and planter areas with seating that overlook Ireland Park. The original silo forms will remain preserving the outer shell and foundation as a symbolic representation of its heritage significance.

This alternative considers complete demolition of all other structures on the site.

The cost estimate for Alternative “D” is presented in the accompanying table:

Alternative “D” – Preserving a Modified Tiered Symbolic Representation of Silos	Estimated Cost
1. Clean-up and demolition of all structures on site with the exception of the modified tiered section. (Initial Trow Report)	\$6,000,000.00
2. Restoration and transformation of tiered silos (estimate)	\$500,000.00
3. Repairs and monitoring required for first 10 years after the structures are restored and preserved.	\$100,000.00
4. Mobilization	\$50,000.00
5. Engineering Cost (10%)	\$665,000.00
6. Contingency (15%)	\$1,097,250.00
<b>Total</b>	<b>\$8,412,250.00</b>

## Alternative “E” – Complete Demolition of All Structures on the Site

Alternative “E” was provided as the least expensive option for immediate and long term preservation of the site structures and considers complete demolition of all other structures on the site

The cost estimate for Alternative “E” is presented in the accompanying table:

<b>Alternative “E” – Complete Demolition of All Structures on Site</b>	<b>Estimated Cost</b>
<b>1. Clean-up and demolition of all structures on site with the exception of the modified tiered section (Initial Trow Report)</b>	\$6,000,000.00
<b>2. Mobilization</b>	\$50,000.00
<b>3. Engineering Cost (10%)</b>	\$605,000.00
<b>4. Contingency (15%)</b>	\$998,250.00
<b>Total</b>	<b>\$7,653,250.00</b>

### **Temporary 2009 Plan – Open Passage to Ireland Park along East Elevation of Silo’s**

Senior management have mandated that the passage to Ireland Park along the east side of the silos is to be reopened to the public in 2009, regardless of any other measures being considered for the site. Safety concerns from the deterioration of the structures required the site to be secured, thus restricting public access to Ireland Park along the east elevation of the silo structures. The unsafe conditions were due to the structurally unsafe marine legs projecting from the east elevation of the silo structure and falling concrete debris from the silo walls. Presently, Ireland Park can only be accessed from the south pier at the foot of Eireann Quay. There has been increased pressure from the local councillor and community to reopen the east walkway (along the east side of the silo structures) to access Ireland Park.

F&RE is currently in the process of retaining a Structural Engineering Consultant to prepare specifications to remove and store on site, the Marine Legs, as well as review the east and south elevations of the silos to remove any immediate hazards that exist and could potentially become a safety concern to the public accessing the area. Since the site is a listed heritage property, the above work will be performed as a temporary measure to meet the mandate of senior management to reopen the east walkway to Ireland Park. Due to the site’s listed heritage designation, permanent modifications to the structures will require City Council approval and directive.

It is important to note that the temporary measures being pursued to open the east walkway access are interim measures and will require monthly inspection by an engineering firm to certify the walkway is safe for from falling debris and can be accessed by the public. Should any of the preservation alternatives be deferred for any length of time, there is a strong possibility that the structure will deteriorate to the point that public safety will be at risk again, requiring the east walkway to be closed again until further repairs are performed.



The cost estimate for the Temporary 2009 Plan is presented in the accompanying table:

<b>Temporary 2009 Plan – Open Passage to Ireland Park along East Side of Silo Structures</b>	<b>Estimated Cost</b>
<b>1. Remove and Store on Site Marine Leg Structures</b>	\$1,000,000.00
<b>2. Remove Immediate Hazards along East and South Elevation of Silo Structures to make safe for Public Access</b>	\$500,000.00
<b>3. Mobilization</b>	\$50,000.00
<b>4. Engineering Cost (10%)</b>	\$155,000.00
<b>5. Contingency (15%)</b>	\$255,750.00
<b>Total</b>	<b>\$1,960,750.00</b>

## **Heritage Preservation Services**

A meeting was arranged with the City’s Heritage Preservation Services (HPS) to discuss the alternatives considered by F&RE and obtain feed back on their position for preservation of the site. HPS is in full support of Alternative “B” and would not entertain any consideration for Alternatives “C” or “D”. F&RE identified that they would be recommending Alternative “D” to Council based on the approved budget for the project. HPS recommended that an Industrial Heritage Consultant be retained to comment on the various heritage aspects for each of the four alternatives to be presented.

An Industrial Heritage Consultant was retained by F&RE to comment on the alternatives being considered for preservation of the silo structures at the subject site. In summary, the Consultant concluded that in order to best achieve the conservation of the architectural and landmark characteristics of the site, preservation of all the silos would be the most preferred recommendation. From a heritage perspective, partial demolition and remediation alternatives (Alternatives “C” and “D”) that are being considered by the City are not adequate conservation measures for managing the heritage resources on the site.

HPS was provided with a copy of the Heritage Consultant’s report and a second meeting was arranged to discuss the consultant’s recommendations. HPS identified that since the Heritage Consultant’s report did not concur with F&RE’s proposed recommendation of Alternative “D”, F&RE should consider pursuing full demolition of the structures on the site. HPS further identified that since the subject property is listed as a Heritage Site, the Toronto Preservation Board (TPB) is required to issue a joint advisory report to Council to comment on the proposed recommendation. Council requires both reports to be submitted prior to ruling on any recommendation presented. In order to have TPB issue an advisory report, F&RE is required to submit to HPS an “Application of Intention to Demolish a Listed Building Under Part IV or Part V of the Ontario Heritage Act”. F&RE

submitted the required application on January 29, 2009, identifying Alternative “D” - Preserve a Modified Tiered Symbolic Representation of Silo’s, as the preferred alternative being recommended by F&RE for preservation of the site.

## **CONCLUSION**

The repairs to the east dock wall is a necessity and will have to be performed with any of the alternatives identified, and are included in the approved 2009 Capital Budget at \$3.8 million with cash flows in both 2009 and 2010.

Based on the different alternatives presented in this report there is a significant future financial investment required by the City if Alternatives “A”, “B” or “C” are considered.

Based on overall estimated cost and in the interest of preserving some symbolic representation of the sites historic significance, Alternative “D” is the most reasonable option based on economic and heritage considerations, and would be implemented under the approved 2009 Capital Budget of \$8.4 Million with cash flows in both 2009 and 2010.

## **CONTACT**

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## **SIGNATURE**

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Bruce Bowes, P.Eng.  
Chief Corporate Officer

## **ATTACHMENTS**

Appendix A: Summary Table – Preservation Alternatives

# **Appendix A:**

## **Summary Table – Preservation Alternatives**

Cost estimates of different alternatives presented in report.