



London & Middlesex Housing Corporation

Société De Logement London & Middlesex

TO: Chair and Members Strategic Priorities and Policy Committee
Meeting on May 15, 2017

FROM: Josh Browne, Chief Executive Officer
London & Middlesex Housing Corporation

SUBJECT: UPDATE ON THE STATE OF PUBLIC HOUSING ASSETS

REPORT HIGHLIGHTS

- LMHC's assets are currently in good condition but are aging and now is the time to plan how to address the short and long term challenge of escalating maintenance, repairs, and capital replacement.
- LMHC has managed to maintain its capital assets at a level that the industry would consider in good standing; however, LMHC's success in this regard will be challenged in the near future with its aging infrastructure and current level of capital funding.
- The majority of total capital funding needs are associated with system renewals that have reached or exceeded their useful service life and as a result should be replaced in their entirety; however, some parts of a system (e.g. HVAC) may not require full replacement, as replacement of specific components may suffice.
- Building systems that have reached or have exceeded their useful service life require higher levels of maintenance and therefore higher associated costs annually.
- In order to maintain the current Facility Condition Index (FCI) of 9% (good condition) over next twenty (20) years, LMHC will require an annual increase in capital funding of \$21.2 million above the existing budget allocation of \$2.2 million. Over the same period, adding \$11.3 million to the current annual funding would result in an ending FCI of 40% (fair condition). Maintaining the current level of funding would result in an ending FCI of 75% (deficient condition).
- The VFA Facility Condition Analysis is a valuable tool, but one component of a critical issue that requires a long-term plan to address.
- LMHC Property Services management and staff have been trained in the use of a new capital planning software (VFA Facility – same software used by the City).

BACKGROUND

An important role of the London & Middlesex Housing Corporation (LMHC) is to ensure that our buildings are maintained in adequate condition for the health and safety of our residents and that the portfolio is physically and functionally sound. It is the responsibility of the Board and Staff to understand the current condition of our building(s) and identify any needed repairs along with the long-term cost implications of necessary capital replacements.

The City of London (City) is ultimately responsible to ensure the health and sustainability of the entire social housing stock under administration, including LMHC, and by extension has a vested interest in asset management and capital renewal.

Asset Management & Facility Condition Assessment (FCA)

LMHC, like most social housing providers, typically spends more of our total funding on capital expenditures and asset management than any other activity. Making the best use of that capital investment requires effectively linking asset management activities with our overall strategic/business plans. It also requires accurate, up-to-date information on capital assets, their condition and needs to ensure they perform as intended or to extend their useful life.

Sound asset management decisions should be based on a comprehensive assessment of capital needs and resources available. One of the fundamental tools used to develop a capital plan is a Facility Condition Assessment (FCA). An FCA provides a clear picture of capital needs both today and looking ahead, based on the current condition of the assessed facility.

More specifically, the FCA process is intended to:

- Determine the condition of each major building component/system and to estimate the remaining useful life of the component based on industry standards;
- Identify the projected replacement/repair needs as well as the timing and associated cost for each over a long term planning period (e.g. 30 years);
- Summarize the replacements/repairs and associated costs for the building for each year during the planning period and for the total planning period;
- Model assumptions and build scenarios regarding replacements/repairs and cost estimates; and
- Provide recommendations on how to extend the useful life of key building components.

Systems include all mechanical, electrical, plumbing, structural and architectural elements in a building. The condition is based on any deficiencies and the remaining useful life of the system. Aggregating the condition of each system provides an indication of the overall facility condition and allows asset managers to target the proper level of investment based upon the function of the building.

Using cost estimates generated by an FCA and incorporating assumptions about cost escalators allows for the better alignment of resource requirements to meet projected needs. FCAs are designed to take into account current conditions and past replacement work as part of the useful life analysis. However, cost estimates generated are typically only valid for up to five (5) years from initial inspection. With that in mind, it is generally recommended that FCAs be updated at least every five (5) years to ensure they continue to reflect current conditions.

The last FCA for LMHC was completed in 2008. As such, the City of London Housing Division initiated the procurement of professional engineering services in 2015 to complete a review of LMHC's portfolio and implementation of a new capital planning system. This was phase I of a multi-phase approach to complete building assessments for the entire social housing portfolio under City administration.

High Level Business Requirements and Capital Information Needs

The assessment of current building conditions and related planning software was required to better understand the physical state and life expectancy of LMHC's housing portfolio. The assessment of LMHC's housing stock and implementation of capital planning software with the capability for reserve fund planning and management, will improve decision-making ability, maximize housing investments, ensure long-term sustainability and support regeneration activities.

Without the right information about the condition of the entire LMHC portfolio and the individual building systems within, it will be difficult to develop a comprehensive Asset Management Strategy and Regeneration Plan(s). Before considering regeneration activities, sufficient information and analysis is necessary to understand the impacts of setting out pro-active strategies that appropriately respond to regeneration challenges and opportunities. Previously, LMHC did not have the ability to generate the kind of data required to develop these plans.

London & Middlesex Housing Corporation (LMHC) Asset Management System

LMHC's last FCA was completed by a local firm at a cost of approximately \$50,000, that has since closed. The strategy at that time was to only investigate major systems/components in the properties as opposed to entire buildings. This less extensive review was done due to limited funding and the continued use of hard copy results from a comprehensive study done in 2001 and updated in 2005.

LMHC's previous asset management system was built using Microsoft Access with limited capacity to perform any calculations, analytics, scenarios and advanced reporting. This system was cumbersome to use, lacked any technical support and could not do any scenario reports/planning. It also lacked cost estimating tools which means projections for future project costs had to be done using rule of thumb and historical comparison estimating.

This needed to change as required capital expenditures and investment decisions must be based on evidence, good data and incorporate long-term strategic planning to ensure "value for money" in the use of public funds.

LMHC has benefited from an updated FCA completed by a firm (VFA) that had a greater base of experience and knowledge. Completing a comprehensive review of the portfolio has provided a better understanding of the current condition of the buildings and the magnitude of the unfunded capital liability. In addition, the implementation of a new "user friendly" system has provided the necessary tool to effectively and more efficiently manage our housing stock by providing improved project planning, more accurate estimating and capability to generate long

term capital plans. Finally, tenants will benefit as buildings will be better places to live and enable LMHC to achieve our new mission and vision, that being:

“We provide and maintain HOMES in a safe and supportive environment to meet the needs of the people we service in our communities”

and

“We envision healthy HOMES and communities in London and Middlesex. Leading by example, LMHC will help make a difference and positively impact lives using housing as the foundation.”

City of London Corporate Asset Management System and Procurement

The City has an existing agreement through the Facilities Division with VFA Canada Corporation to license their capital planning and management software application. The VFA product provides Facilities with the ability to maintain an understanding of what buildings the City owns and their individual and collective monetary values by providing a detailed inventory of facilities and various building elements. From that starting point, VFA software enhances the ability to determine the condition of the City’s facility assets based on building surveys which are carried out on a regular basis. These surveys implement measurement criteria that are consistent from facility to facility. The software also stores photographs and notations of facilities and various elements.

As the current software provider for Facilities Division, the City sent a Request for Information (RFI) to VFA in September 2014. Their response indicated that they were capable of fulfilling the City’s requirements and included the estimated cost to conduct FCAs and provide a license to their capital planning software for LMHC. A review of the costs showed that VFA’s proposal was competitive and in line with industry averages for the same type of work. Facilities Division has also indicated that VFA’s support has always been reliable and effective.

The City was confident that the project would be successful and provide a software solution required for ongoing asset planning and management at a fair and reasonable price point. The City is also in the process of developing standardized Corporate Asset Management (CAM) across the entire corporation including the purchase of an enterprise system (CAM system) that will help in the modelling of risk, level of service and financial needs. This system depends on appropriate condition and inventory information.

For most municipal facilities in London, this data is collected in the existing VFA system managed by the Facilities Division. Therefore, a VFA-CAM interface was envisioned in the implementation of the new CAM system. The social housing stock is a blend of public and private properties for which inventory and condition data is not yet housed in a format that can be easily integrated in the broader Corporate Asset Management program. By adding social housing assets to the existing VFA system and by completing the condition assessments, the expanded use of VFA will aid greatly in supporting the information base as the City moves towards standardized asset management practices. This is an appropriate fit for the future CAM system.

VFA FACILITY CONDITION ANALYSIS REPORT

In 2015, VFA conducted a rigorous assessment of the current condition of LMHC's buildings which included a walk-through of the buildings and properties, a review of maintenance history and drawings and discussions with key staff. The assessment covered all major building components and forecast replacement needs over the extended operating period of the building (up to 30 years) using standard useful life estimates.

The resulting summary portfolio report (released in April 2016), attached as **Appendix A**, provides a fundamental understanding of capital needs and a way to focus efforts that extend the useful life of building elements. It will help plan for major capital replacements and repairs in terms of both timing and resources.

The report provides an assessment summary, scope, methodology, requirements, actions, priorities and overview of the assessment findings, including asset Facility Condition Index (FCIs), System Condition Index (SCI) and funding needs. The report also provides for three (3) funding scenarios including: (1) maintaining the current FCI of .09 or 9%; (2) targeting a specific FCI of .40 or 40%; and (3) extrapolating specific funding by exploring the effects of investing the current LMHC capital budget of \$2.2 million annually.

The following tables provide a summary of the assets assessed and the funding scenarios with impact on the portfolio's Facility Condition Index (FCI) compared over 20 years:

Buildings Assessed (3 County; 14 Highrise; 8 Townhouse/Semi-detached)	154 Assets (25 Sites)
Total Asset Area (SF)	2,885,673
Current Replacement Value (CRV)	\$621.3m
Average Asset Age	46 Years
Average Asset 2 Year FCI	0.09 (9%)
Condition Range	"Good"
2 Year FCI Renewal Cost	\$56.8 M
Average Requirement Index (RI):	0.36 (36%)
Total Requirement Cost	\$223.8 M

Funding Scenario	Total Applied Funding	Average per Year	Annual Cost per SF	% of Current Replacement Value (CRV)	Ending FCI
(1) Maintain FCI	\$467.5 M	\$23.4 M	\$8.10	0.038 (3.8%)	0.09 (9%)
(2) Target (Specific FCI)	\$270.6 M	\$13.5 M	\$4.69	0.022 (2.2%)	0.40 (40%)
(3) Extrapolate (Specific) Funding	\$44.2 M	\$2.2 M	\$0.77	0.004 (0.4 %)	0.75 (75%)

What is important to note is that although LMHC's assets are currently in good condition, they are aging (unfortunately in a uniform manner) and now is the time to plan how to address this future challenge. LMHC has been doing an appropriate job in maintaining capital assets at a level that the industry would consider in good standing. This level of maintenance is significant considering that LMHC buildings provide homes to a substantial portion of the City's population living in social and affordable housing. However, LMHC's continued success in this regard will be challenged by their aging infrastructure.

The VFA analysis is a valuable tool. It is one component of an issue that requires a long-term plan to address. Careful study and long-term planning are necessary to avoid quick reactions and poor decision-making. There are a number of technical concepts presented that result in some very large funding needs, which can be misunderstood, misused and generate a reactionary response.

VFA Facility (Capital Planning and Management Software)

The assessments are maintained independently through the use of the VFA capital planning software. The software can be updated with new information on an on-going basis for up-to-date projection of future needs. The capital planning software provides capabilities to help strategically manage capital requirements by accelerating or deferring planned work to reflect real world conditions.

The software provides a framework for determining what the current condition of LMHC's buildings as a whole as well as an understanding of what work should have been completed in the past that remains outstanding. With this information in hand, LMHC can determine which building to work on, at what point in time (competing requirements) as well as what work to carry out at each building (competing elements within a building).

NEXT STEPS and OTHER CONSIDERATIONS

The condition assessment is simply one component of a broader asset management strategy that LMHC will develop. Developing and implementing an asset management strategy will allow for a detailed understanding of what physical assets are currently held, their value, future value, and costs associated with maintaining them or disposing of them. Having a comprehensive asset management strategy in place will allow LMHC to best manage their assets and deliver on providing healthier homes and communities for the people they service.

In addition to the current state of infrastructure, the strategy should address and/or include the following elements:

1. Asset management objectives that are aligned with the organizational objectives, informed by demand information (i.e. stakeholder wants and needs) and consistent with the condition, performance and capability of both the asset portfolio and the asset management system.
2. Asset Management Planning Process – summary of the approach used to develop the asset management strategy, with reference to analyses and facility condition assessment.

3. Strategic Initiatives – a description of the selected strategic initiatives, including mapping against the asset management objectives, targets and measures, relative priorities, timeframes and accountabilities
4. Key Risks – identification of the key risks to achievement and any mitigation actions required.
5. Desired level of service (the current FCI is approx. 0.1, but what is an acceptable long-term FCI).
6. Develop prioritization criteria based on condition and level of risk that will be used to assess and prioritize needs going forward.
7. Financing strategy including what is covered through operating and capital budgets, reserve fund management for lifecycle renewal purposes, strategy for pursuing alternative forms of funding (e.g. energy efficiency grants, Federal and Provincial Infrastructure funding).
8. Policies and Procedures to ensure the system is used to its full capacity (create efficiencies and support LMHC's asset management strategy, maintenance plans and reporting/monitoring) and the data is kept current and its integrity maintained.

A comprehensive asset management strategy will allow LMHC to develop a necessary asset management implementation plan(s) which should include, but not be limited to, the following:

1. Specific priorities/needs on a micro level (e.g. "Window Replacement at 202 McNay") using the data provided by the VFA analysis;
2. Consideration of the real timelines – although the VFA analysis is based on industry standard useful lives, LMHC will need to assess each of their assets to determine what the optimal renewal timeframe is, and what the longest possible renewal timeframe is (in other words, peaks in the infrastructure renewal lifecycle can be smoothed out by assessing a range of when the required projects could be completed);
3. Consideration of the real costs – VFA's cost estimates are based on full replacement, but that may not be required; VFA costing is based on "Means" pricing and includes an adjustment for the work to be performed in London, ON.
4. Consideration of the costs that can be funded through operating expenditures – VFA's analysis estimates that \$13.5M of annual spending is required to maintain a 0.4 FCI relative to a \$2.2M annual budget, however this ignores some needs that are already addressed through operating funding;
5. Are there any other financing options (e.g. incentive grants) that can be used to address certain needs;
6. Consideration must also be given to how the implementation plan fits within the Social Housing Regeneration business case approved as part of the City's 2016-19 Multi-year Budget. LMHC's lifecycle priorities should be considered in the context of possible regeneration opportunities, which may impact prioritization. It would include decisions on revitalization, disposition or regeneration of buildings.

Other Considerations

Many of the higher cost areas identified are areas that LMHC addresses through ongoing operations and infrastructure maintenance budgets (paint, walls, flooring, fixtures). Some (but notably a diminishing fraction) of the stated costs are built into LMHC's ongoing capital budget.

In addition, public housing infrastructure (especially high rises and townhouses) was built in a short period of time in the 1960s and 1970s and require similar higher cost lifecycle replacements at around the same time. All costs were based on the full replacement of the associated asset, however some parts of a system (e.g. HVAC) do not require full replacement as replacement of specific components may suffice unlike other systems (e.g. plumbing, electrical) where there is a lifespan of the distribution infrastructure behind the walls which has a very high cost to replace.

Therefore, more information may be required to understand what the true Requirement Index (RI) costs of these areas are. Consideration may be given to presenting two Facility Condition Index (FCI) plans by fully separating high rises from all other built forms. High rises by definition are long term, high-cost, high-value assets.

Elevators may also need to be separately considered as the imminent replacement of all elevators is misleading and not practical. Given the timing and financial cost, LMHC may need to review its current “elevator report and strategy” and develop a separate plan for elevator lifecycle replacement staged over multiple years.

Another consideration is how the VFA software could be utilized to:

- Acquire and maintain reliable data and use it to identify facility priorities by time, criticality, and strategic business impact.
- Easily model multiple scenarios to develop the most credible and defensible capital funding requests aligned with key business objectives.
- Quickly and easily reshuffle the deck of projects to optimize budget use.
- Communicate actionable business intelligence to key stakeholders based on a holistic view of LMHC’s facilities portfolio.
- Set the standard for facility management excellence in social housing sector for London.

FINANCIAL IMPACT

There is no immediate funding request from LMHC associated with this report. As part of LMHC’s new strategic plan, we are committed to working with Civic Administration to reduce the capital funding gap identified by the VFA Report over the long term. This may require the submission of a budget amendment for 2018 and 2019 to increase the approved 2016-19 Multi-year Budget which includes annual capital funding of approximately \$2.2 million per year for 2016 through 2019.

The appropriate capital funding level for the next multiyear budget cycle will be reviewed upon the completion of a comprehensive asset management strategy and implementation plans. Any adjustments to funding levels will be the subject of a multiyear budget requirements, including but not limited to the submission of a business case.

CONCLUSION

Lifecycle replacement and the repair of major building systems plays a pivotal role in overall maintenance. While not as visible or frequent as planned maintenance activities, the cost of these asset management activities are significantly larger in comparison. Major systems ensure that the buildings – LMHC’s primary asset – can continue to function and serve resident needs.

Failure to replace or repair these major systems in a timely fashion puts the value of the asset at risk and creates a potential future liability for LMHC and the City. Deferred repairs can also impact on quality of life for residents and negatively influence the marketability and attractiveness of each property.

Using one system to manage the FCA process means that information can be roll up into a portfolio summary seamlessly, provides a consistent framework for updating and managing condition information beyond the 5-year “refresh” period and will generate a more accurate forecast of needs when actual replacement and repair activity against estimates are regularly logged over time.

As an important first step, this report and associated work brings the City of London and LHMC together in order to understand and begin addressing, in a collaborative way, the funding gap between future capital needs and available funding resources. Moving forward, LMHC must now consider the most efficient and effective strategy for the management and sustainability of one of the City’s most important assets – Public Housing. This includes the development of a detailed Asset Management Strategy and Implementation Plan in order to understand and address the identified funding gap between anticipated future lifecycle renewal needs and available funding resources.

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Attach: Appendix A – VFA Final Report