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THREE-STREAM WASTE MANAGEMENT IN NEW HIGH-RISE RESIDENTIAL BUILDINGS

(Regional Council at its meeting on June 25, 2010 amended this Clause to include recommendation 4 as follows:

- 4. *Council request the Ministry of Municipal Affairs and Housing to amend the Building Code to include mandatory three-stream waste management in high-rise residential buildings.)***

The Planning and Economic Development Committee recommends the adoption of the recommendations contained in the following report dated May 19, 2010, from the Commissioner of Planning and Development Services and the Commissioner of Environmental Services.

1. RECOMMENDATIONS

It is recommended that:

1. All local municipalities include conditions of planning and building approval for high-rise multi-family residential buildings that provides internal building capabilities for three stream waste management.
2. In consultation with the local municipal staff, three-stream waste management best practices for internal building design be determined for all local municipalities to put them into practice by January 2011.
3. The Regional Clerk forward a copy of this report to the Clerks of the local municipalities.

2. PURPOSE

This report provides policy and site plan direction for local municipalities, who have not already done so, to require the internal building infrastructure in high-rise multi-family residential building for three-stream waste management. Early implementation of high-rise three-stream waste management through planning and building approvals is in preparation for a broader long-term Region-wide waste program guided by a proposed Integrated Waste Management Master Plan, which is currently in its initial stages of development.

3. BACKGROUND

Official Plan and Sustainability Strategy provide direction to expand the three-stream waste management to all types of buildings in the Region

The Regional Official Plan provides for a sustainable approach to waste management that focuses on the 4R hierarchy of reduce, reuse, recycle and recover, and this approach is dramatically reducing dependence on landfills. Continued waste diversion, innovative waste disposal alternatives and opportunities to make use of waste as a resource are important elements of the Region's waste management planning. In addition, the Region will continue to advocate for waste prevention at source, consistent with the principles of the waste minimization.

In terms of reducing waste in high rise residential buildings, the Official Plan contains a number of policies regarding three-stream waste management including the requirement "that all new multi-unit residential buildings incorporate three stream waste collection capabilities."

Early Implementation of internal three-stream waste systems in high-rise residential buildings also supports future implementation of the Integrated Waste Management Master Plan

The updated Regional Official Plan requires the development of an Integrated Waste Management Master Plan based on a sustainable life-cycle approach containing comprehensive strategies to reduce, reuse, recycle and recover all forms of waste in York Region. The development of this broader plan is proposed to now move forward as outlined in the "Development of an Integrated Long Term Waste Management Master Plan" report. The report was considered by the Environmental Services Committee on June 9, 2010.

The long term waste management plan will consider some of the broader current issues for the management of three-stream waste in high-rise collection such as: the provincial mandated management of only garbage and recycling excluding organics, current capacity limitation to process additional organics in Ontario, and other broader municipal service considerations. In the short term, early implementation to ensure internal systems are in place for three-stream waste management in high-rise residential buildings provides an opportunity for a higher percentage of people to fully participate in three-stream waste management in the future, as supported by the broader Integrated Waste Management Master Plan direction. This internal building capacity can be designed and built in for a high-rise building now, even if the actual service is not provided until sometime in the future.

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Implementation of three-stream capabilities in high-rise residential building acknowledges intensification goals and builds on incentive program adopted by the Region

Residential intensification, in primarily high-rise form, will add approximately 90,000 units to the housing stock by 2031 as set out in the intensification targets of the adopted Regional Official Plan. Addressing waste diversion in this increasing significant form of housing will complement the highly successful implementation of three-stream waste management for grade-related housing.

In addition, the implementation of the Region's Sustainable Housing Through LEED[®] program in 2007 for high-rise residential buildings (4 storeys and up) included a requirement for three-stream waste management. This program provided an opportunity to gain experience in design and implementation. This, in turn, will assist applying implementation to all new residential high-rise buildings.

4. ANALYSIS AND OPTIONS

As the Region intensifies in accordance with the newly adopted Official Plan, high density residential buildings will become an increasingly larger proportion of the housing stock. It is important that every type of new housing stock be designed to promote participation in waste diversion.

A number of local municipalities already require three-stream waste management capabilities in high-rise residential buildings

Currently, Markham, Newmarket, Richmond Hill and Vaughan all require new high-rise residential construction to include three-stream waste management capabilities. A summary of the practices in each local municipality is outlined in *Attachment 1*. These municipalities have incorporated policies and procedures into their site plan processes to ensure on site implementation within new buildings.

The Markham example of site plan requirements, found in *Attachment 2*, illustrates the level of detail local municipalities address in their implementation, through the site plan process. While Markham is currently the only municipality that provides municipal collection of three-stream waste rather than private pick-up, many of the considerations are the same in terms of building and site design. While Regional waste management contracts and infrastructure do not currently have sufficient capacity available to manage material collected from multi-residential dwellings by the local municipalities, this issue will be thoroughly examined through the broader Integrated Waste Management Master Plan. The master plan process involves a comprehensive consultation and analysis process that can thoroughly deal with the larger issues related to collection and processing of the three-stream waste once it leaves the building site.

Prior to the completion of the Integrated Waste Management Master Plan, local municipalities have the opportunity to require new high-rise buildings contain internal components for three stream waste management

There is an opportunity for all municipalities to include the internal structures and space needed to manage three stream waste (recycling, organics and residual waste) in residential high-rise buildings through the site plan approval process. If all municipalities include the following components in site plan approval conditions, the internal building requirements can be put in place for buildings to be constructed in the next few years that are currently in the planning process:

- The Owner agrees to provide three-stream sorting and collection systems for organics, recyclable materials and residual waste.
- The Owner agrees to design and construct internal material storage room(s) with sufficient space to store organics, recyclable materials and residual waste for a minimum of one week.
- The Owner agrees to design and construct the system so that it promotes access to diversion services (organics and recycling) that are as convenient as disposal (residual waste).

Implementation of internal structures in new buildings will be more cost effective than retrofitting buildings later

Early implementation of three-stream waste management system in high-rise residential buildings is important to achieving the long term sustainable approach to waste management which will be a key foundation of the future Integrated Waste Management Master Plan. However, the implementation of internal structures in high density residential buildings does not need to wait for the completion of the broader Plan and will be more cost effective than retrofitting buildings later to implement a broader three stream waste management system that includes all building types.

Local Municipalities can determine Best Practices for three-stream waste management in high-rise residential through sharing experiences & information

Joint technical discussions between local municipal staff with opportunities to further share experiences will assist in determining the most appropriate best practice within York Region. In addition to technical aspects of building design for three-stream waste collection, a discussion on discouraging the use of garborators to manage food waste in multi-unit residential dwellings needs to be included. There is an increased cost to the Region for treatment of these organics through wastewater facilities.

Each municipality requiring three-stream waste management in high-rises has slightly different implementation details and experience with the different technologies providing an opportunity to share these differences. It is proposed that best practices continue to be examined with the local municipalities over the several months such that a best practice can be operationalized by all nine local municipalities early in 2011. The four largest municipalities, where approximately 90% of the high-rise residential units will be built over the next 20 years, already have included three-stream waste management conditions in their site plan process providing a solid basis to move forward in the balance of the Region with site plan conditions.

Best practices will help to ensure the development community is equipped with information about best techniques and technology for managing organics in high-rise and multi-residential buildings. Use of best practices are necessary to promote sustainable methods of managing waste and avoidance of the use of garborators, which can prematurely degrade linear wastewater infrastructure and instigate undesirable odour impacts on our communities.

A broader look at mixed-use and other types of development is also important, but will be dealt with through the master plan process currently under development. This short term component is intended to apply only to new high-rise residential buildings.

Relationship to Vision 2026

The expansion of three-stream waste management in all new high-rise residential building is in keeping with our goal to enhance the environment through promoting conservation through the reduction of residual waste generation. This initiative is also consistent with the goal for an effective, efficient and environmentally sensitive waste management system through continued encouragement of waste diversion from landfill.

5. FINANCIAL IMPLICATIONS

Implementation of three-stream waste management within all new high rise residential buildings is more financially effective than future retrofitting

As the Region continues to grow, demand for sustainable waste management services will increase. The implementation of internal infrastructure in high rise buildings as soon as possible will help minimize the requirement for future retrofits of high-rise buildings.

The overall financial implications that relate to waste processing capacity and operation costs will be considered as part of the Integrated Waste Management Master Plan process.

6. LOCAL MUNICIPAL IMPACT

Under the two-tier service delivery model, York Region and the local municipalities share the responsibility of delivering waste management services. Therefore a three-stream system is the responsibility of both parties. The sharing of practices between local municipalities and determination best practices through continued consultation will ensure that local municipalities implement the best practices available and maximize effectiveness of services to residents.

The consideration of “vaults, central storage and collection areas and other facilities and enclosures for the storage of garbage and other waste material [recycling]” is already part of the site plan review process as set out in the *Planning Act*. While the review does not appear to impact planning staff workload requirements, some additional technical expertise may be required from public works staff to provide advice regarding aspects such a space and technology requirements.

Convenience to our residents is fundamental to the overall participation and success of our programs. Similarly, a multi-unit residential program will need to be convenient for the residents to fully participate in and minimize contamination.

Further consultation with local staff provides an opportunity to share information and provide for early implementation

Local staff was initially consulted through the regular Planning Commissioners/ Directors meeting in April and were supportive of examining best practices to help implement three-stream waste management in new high-rise residential buildings.

While several municipalities currently require high-rise residential buildings be designed for three-stream waste management, every municipality should be building in the capacity for three-stream waste management in high-rise buildings as soon as possible. At minimum, planning and building approval conditions should require that internal building capabilities for three stream waste management be provided for all new high-rise multi-family residential buildings.

Local municipal staff will be further consulted in the next several months regarding best practices for high-rise residential three-stream waste management with the goal of having a best practice that can be operationalized by all municipalities early in 2011. Further working sessions with both planning and waste management staff will help refine the implementation of best practices in terms of three-stream waste management capabilities within new high-rise residential buildings.

7. CONCLUSION

The implementation of internal structures in new high density residential buildings for three-stream waste management as soon as possible will help support the longer term goals for waste diversion in the Region. Early implementation within high-rises will also support components of the broader Integrated Waste Management Master Plan development process that has just been initiated and considered by the Environmental Services Committee. Ensuring initiation across the entire Region will be more cost effective than retrofitting buildings later to implement a broader three stream waste management system. The continued support for the sustainable initiatives such as waste reduction as early as possible is important in realizing the long term sustainable vision for the Region.

For more information on this report, please contact Heather Konefat, Director of Community Planning at (905) 830-4444, Ext. 1502 or Laura McDowell, Director of Environmental Promotion and Protection at Ext. 5077.

The Senior Management Group has reviewed this report.

(The two attachments referred to in this clause are attached to this report.)

Current Municipal Site Plan Approval Practices Related to three-stream waste Collection for Multi-Residential Development

Aurora

- Not currently requiring three stream-waste collection as a condition of site plan approval.
- Three-stream waste collection as a condition of site plan approval currently considering updating site plan development policies to incorporate this requirement.

East Gwillimbury

- Not currently requiring three-stream waste collection as a condition of site plan approval.

Georgina

- Not currently requiring three-stream waste collection as a condition of site plan approval.

King

- Not currently requiring three-stream waste collection as a condition of site plan approval.
- Haven't had to address the issue because King hasn't experienced any development of this type.

Markham

- Three-stream waste collection (waste, recycling, organics) as a requirement for multi-residential high rise apartments.
- Markham provides municipal collection for all multi-residential buildings.

Newmarket

- Require the mandatory provision of space for recycling materials and organic waste through site plan approval.
- Multi-residential developments required to arrange for private waste/recycling collection.
- Newmarket is partnering with York Region on a Three-Stream Waste Management Park Pilot Project.

Richmond Hill

- Current practice includes a requirement for tri-sorters in multi-residential buildings; buildings meeting Town standards can then apply for municipal collection.
- In the process of updating policy related to waste management practices for new development.

- Piloting three stream waste collection in three multi-residential buildings; ultimately plan to roll out municipal collection for multi-res on a municipal wide bases (potentially 65+ buildings).

Vaughan

- Has Waste Collection Design Standards intended for all developments and redevelopments through site plan control.
- For multi residential Vaughan has a requirement for a multiple sort system on every floor.
- Requires that multi-residential developments arrange for private waste/recycling collection.

Whitchurch-Stouffville

- No site plan requirements for three-stream waste collection.
- Currently, provides garbage collection and have recently launched a recycling program for some multi-res establishments.
- provide three stream collection (garbage/recycling/organics) collection to very small ICI waste generators.

Excerpt from Town of Markham Three-Stream Waste Management Requirements through Site Plan

The Owner must submit revised drawings to this Department showing the description and location of the proposed internal waste management system, including garbage room(s), for the collection of waste, recyclable and organic materials.

The Waste Management Department requires ground level access to the internal refuse storage room(s).

At the time of preparation of the Site Plan Control Agreement, this Department requires that the following clauses be made a part of the document:

1. The Owner acknowledges that all waste, recyclable and organic materials will be collected by the Town.
2. The Owner covenants and agrees to provide 3-Stream sorting and collection system for organics, recyclable materials and residual waste as required by the Town. Acceptable 3-stream collection systems include the following;
 - Single chute systems with tri-sorting equipment and lock-out chute doors
 - Dual chute systems with bi-sorting equipment on one chute and lock-out chute doors on the bi-sorted chute
 - Triple chute systems
 - Recycling rooms with no chutes (for smaller buildings)
3. The owner covenants and agrees to design and construct internal material storage room(s) with sufficient space to store organics, recyclable materials and residual waste for a minimum of one week.
4. The Owner covenants and agrees to purchase from the Town one (1) in unit recycling container and one (1) organics kitchen collector unit per dwelling unit so that each resident may participate in the Town's 3-Stream program. Furthermore, the Owner shall ensure that the in unit recycling containers, kitchen collectors and educational materials are deposited in each dwelling unit on or before the date of closing of the first sale or new tenant occupancy from time to time.
5. The Owner agrees to contact the Town at least four weeks prior to unit occupancy to arrange an appointment time at which the in unit recycling containers, kitchen collectors, and educational materials are to be collected by the Owner from the Town at a location determined by the Town.
6. The Owner agrees to pay to the Town the cost for the in unit recycling containers and kitchen collectors as outlined in Schedule "D" to this Agreement and to provide said recycling containers and organics kitchen collectors to the residents at the same cost as paid to the Town.
7. The Town covenants and agrees to provide, at no cost to the Owner, all educational materials necessary to enable the residents to participate in the Town's waste diversion program.

8. The Owner shall:
 - a. ensure that there will be absolutely no external storage of waste, recyclable, or organic materials.
 - b. ensure that all waste, recycling and organics containers are placed out on the day of collection and returned to the refuse storage room(s) immediately following collection, and that the doors to the refuse storage room(s) remain closed at all times other than when the organics, recycling and refuse bins are being moved from the internal refuse room for collection;
 - c. be solely responsible for site maintenance in order to maintain an acceptable level of appearance with regard to waste management practices;
9. Where the Owner has retained a management company to carry out the duties outlined in Section 9 the Owner shall remain responsible for those duties and will monitor and supervise the management company so as to ensure that all duties are performed in a timely and proper fashion and in accordance with the Town of Markham's By-Law 32-95, as amended, and the provisions of this Agreement.