



No Safe Levels of Exposure...

SUBMISSION ON THE NEW CITY-WIDE DRAFT ZONING BYLAW

Re Separation Distances for Crematoriums from Sensitive Land Uses

## Submission on the New City-Wide Draft Zoning By-law

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DATE: February 8, 2013

TO: The Chair and Members of the Planning and Growth Management Committee

FROM: Crematorium Working Group – Moore Park, Toronto

SUBJECT: **Separation Distances for Crematoriums from Sensitive Land Uses in the City-Wide Zoning By-law**

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### A. Purpose

This submission addresses the appropriate siting of crematoriums to protect public health and safety. The current Draft Zoning By-law contains an inadequate separation distance of 30 meters between crematoriums and sensitive land uses. As a community-based working group of parents concerned about crematorium emissions, we ask the Planning and Growth Management Committee to consider the public interest as paramount in the siting of new crematoriums, and to require separation distances of at least 300 metres between crematoriums and residential neighbourhoods in the City-Wide Zoning By-law. We further ask the City to withhold approvals for new crematorium facilities until such a critical public safeguard is established in the Zoning By-law.

### B. Background

Prior to July 2012, the siting of crematoriums only within the boundaries of cemeteries was mandated and restricted under the former provincial *Cemeteries Act*. This resulted in conflicting land uses, as crematoriums were permitted to operate in close proximity to residential areas. This also has placed vulnerable populations at risk, whenever such industrial incinerators were approved by the province and by municipalities without site-specific environmental or public health assessments. Many existing crematoriums throughout Ontario encroach on residential areas, heritage sites and green spaces, endangering the health and safety of vulnerable populations and the environment through the release of toxic emissions. A case in point is the Mount Pleasant crematorium in Toronto, situated 16.5 metres from the nearest homes, and directly affecting at least 200 residences, as well as apartment buildings and school playgrounds, with continuous unabated toxic emissions over the past 40 years. These emissions include significant levels of mercury – a highly toxic and persistent environmental carcinogen; fine particulate matter (PM<sub>2.5</sub>) – a substance of great concern in southern Ontario, which causes asthma and respiratory disease; dioxins and furans – dangerous toxins linked to breast cancer and other diseases in vulnerable populations; as well as nitrogen oxides, VOC, heavy metals and other carcinogens released during the combustion process.<sup>1</sup>

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1 - Emissions data from Toronto Public Health's online calculator for crematoriums show annual releases of 2 kg mercury, 38 kg PM<sub>2.5</sub>, 574 kg nitrogen oxide and 112 kg VOC from burning 1100 bodies/yr.

Effective July 1, 2012 the new *Funeral, Burial and Cremation Services Act, 2002* permits the establishment of crematoriums outside of cemeteries, subject only to local land use policies and zoning bylaws. As noted by the Mississauga Commissioner of Planning and Building, while the new Act does not require municipalities to expand the areas in which crematoriums may locate, the legislation was updated to be more responsive to rapidly increasing consumer demand for cremation services. If the City chooses to maintain the status quo, it will have to evaluate each crematorium proposal on an individual basis in the absence of policies that meet the intent of the new provincial legislation. Without examining this matter on a city-wide basis, the City will be vulnerable to site specific appeals at the Ontario Municipal Board. (See: [http://www5.mississauga.ca/agendas/planning/2012/04\\_02\\_12/Item03CrematoriumRpt.pdf](http://www5.mississauga.ca/agendas/planning/2012/04_02_12/Item03CrematoriumRpt.pdf))

Crematoriums are industrial incinerators, and as such, are major emitters of carcinogens, especially mercury, dioxins and furans, particulate matter, nitrogen oxide, VOC and heavy metals. Long-term exposure to such emissions, even at low levels, poses a serious risk to human health, particularly to adjacent vulnerable populations: infants and children, pregnant and nursing mothers, adolescent girls, the elderly, and those with immune and respiratory disorders. The World Health Organization states that there are **no safe levels of exposure to mercury, PM2.5 and dioxins**, and that all incinerators (including crematoriums) should be sited away from populated areas. However, the Ministry of the Environment can approve the operations of such incinerators adjacent to and encroaching on residential areas on the assumption that compliance with Ontario air quality standards (O.Reg. 419) adequately protects human health. As noted in an important study on air quality and land use compatibility by the Halton Medical Officer of Health, such permitting programs *do not* protect human health, particularly that of vulnerable populations:

In Ontario, the Ministry of the Environment has responsibility for permitting industrial facilities and issues Certificates of Approval based on the emissions from a single facility and, sometimes, on a single source within a facility. This approach does not take into consideration background concentrations (air pollution due to emission sources beyond a community's border) or cumulative impacts (air pollution from other sources from the same facility or from other, nearby, facilities).

Consequently, while the Certificate of Approval process ensures that individual point or area sources do not exceed air standards, it does not ensure that air levels within a community stay below air standards. Finally, air permitting programs are based on the assumption that operating procedures and controls adequately protect against upset conditions; they do not necessarily consider fugitive emissions from doors, diesel exhaust from trucks, or exposures that can occur in the event of the failure of an engineering control system. *These shortcomings in regulatory control have been mitigated to some extent by recommending separation distances to keep industrial facilities and sensitive land uses apart.* (Emphasis per the authors of this submission. See: [http://www.opha.on.ca/resources/docs/AirQuality\\_LandUse-Feb09.pdf](http://www.opha.on.ca/resources/docs/AirQuality_LandUse-Feb09.pdf).)

A further shortcoming in the Ministry's approval process for crematoriums is the lack of a legislated standard on emissions of fine particulate matter (PM10 and PM2.5). This means the Ministry may approve crematoriums without consideration of their emissions of fine particulate matter – a carcinogenic substance of serious concern in the GTA, that is linked to asthma and respiratory disease – and is particularly harmful to children. (See:

Town of Oakville's submission to MOE at: <http://www.oakville.ca/assets/general%20-%20environment/EBRApplication-Supplementary-2010Apr.pdf>.) High levels of PM2.5 in the air account for several thousand hospitalizations per year in Toronto, of which children form the largest age group.

Crematoriums are considered as Type II facilities under Ministry of the Environment *D6 Guidelines* for the compatible siting of industrial facilities to protect the environment and human health. The recommended minimum setback for a Type II industrial use from a sensitive land use is 70 metres (230 ft.) with a potential area of influence of 300 metres (985 ft.). According to the D6 Guidelines, residential land use shall be considered sensitive 24 hours/day.

We believe crematoriums should be located no closer than **300 metres** (985 ft.) from residential and other sensitive land uses, and preferably, considerably further than 300 metres. Based on the evidence cited above, it is critical to protect human health by directing crematoriums away from residential zones to lands designated “Industrial” or on cemetery lands designated as “Open Space” **only if adequately separated from residential and other sensitive land uses.**

This recommendation is consistent with best practices in jurisdictions around the world, including in Western Australia and U.S., which have entrenched 300-metre separation distances between crematoriums and residential areas, with some jurisdictions requiring public reporting on toxic emissions in real-time on public websites and in media. (See <http://www.boroughofkulpmont.org/Documents/2006-02.pdf> for the Borough of Kulpmont, Pennsylvania Air Pollution Control Ordinance.)

## **C. Recommendations**

The current City-Wide Draft Zoning Bylaw states:

### **90.70.20.100 Conditions**

#### **(2) Crematorium**

A crematorium is permitted in an OC zone, if it is:

- (A) together with a cemetery; and**
- (B) no closer than 30.0 metres from a lot in a Residential Zone category or Residential Apartment Zone category.**

As noted, this is inconsistent with MOE *D6 Guidelines* on land use compatibility, which stipulate a separation of 300 metres, and with best practices in other jurisdictions. In a City-Wide Zoning Bylaw this clause should be amended to:

- 1. Impose a minimum 300-metre setback of crematoriums from residential and other sensitive land uses to protect public health;**
- 2. Remove the requirement of siting crematoriums in cemeteries to allow for competitive expansion of the sector in the public interest;**

3. **Direct crematoriums to designated areas zoned for industrial use and adequately separated from residential zones and consider incentives for the relocation of existing crematoriums to such designated 'crematorium zones';**
4. **Withhold approvals for new crematoriums until such safeguards have been established in the Zoning By-law.**

## **D. Policy and Revenue Implications**

**1. Existing Crematoriums** – City staff have identified seven existing crematoriums within the limits of the City of Toronto, all of which encroach on sensitive land uses, including residential areas as well as significant environmental and heritage sites. The nearest crematorium to adjacent residential zones is Forest Lawn Crematorium – a mere 14.5 metres from homes. None of the seven aging crematoriums in Toronto has state-of-the-art emissions abatement equipment. Some, like Mount Pleasant, have been emitting uncontrolled quantities of toxins, continuously, for as long as forty years. It is timely to consider decommissioning aging crematoriums in favour of a business model that invests in clean incineration technology (including non-burn technologies) *and* reduces risk to residential populations by relocating existing incinerators to industrial areas zoned for high-risk industrial processes.

The precedent established in the 1990s by then-Environment Minister Ruth Grier of the closure of 100 medical waste incinerators in Ontario on public health grounds is instructive.

**2. Future Revenue Stream** – Under the *Income Tax Act, s. 3(1)*, cemeteries and lands owned by a church or religious organization are exempt from property tax. Can the City confirm whether it receives any property tax revenues from crematoriums sited in cemeteries? If not, the City may wish to consider the economic benefits of siting future crematoriums outside cemeteries in terms of both downstream property tax revenues and job creation.

**3. Public Right-to-Know** – Under the City's *Environmental Reporting and Disclosure Bylaw* (ChemTRAC), crematoriums are now required to submit information on chemical releases of 25 substances of concern, to be made public on an annual basis. This is insufficient for the public to act quickly to protect themselves and their families in the case of catastrophic toxic releases from such facilities. Regardless of their location, all incinerator operators must be required to monitor and make public, **in real-time**, all emissions of toxic substances, including dioxins which are not currently covered under ChemTRAC, as well as toxic waste. (See Borough of Kulpmont, PA - Air Pollution Control Ordinance for precedent.)

**4. Public Opposition** - As the ChemTRAC by-law begins to expose polluting crematoriums throughout Toronto, the City can expect considerable opposition from affected residents and demands that such facilities be relocated to a safe distance from residential areas. Crematorium operators can be expected to resist any such demands.

The City may wish to consider capital incentives and/or tax incentives to encourage their relocation with the overriding goal of protecting human health.

**5. Mercury, Dioxin and PM2.5 Emissions** – In United Kingdom, concerns over mercury emissions from incinerators of human remains and medical waste are such that operators are required to eliminate mercury emissions by 2020. Toronto Public Health has voiced support for removal of mercury dental amalgams from bodies prior to cremation, in light of the significant levels of harmful mercury emissions from the incineration of human remains. International agencies like the WHO and U.S. EPA are leading global efforts to phase-out dioxin releases to the atmosphere. Ontario is lagging behind these efforts with respect to crematoriums. It is also of considerable concern that the Ministry of the Environment has no legislated standard on PM2.5 and can issue approvals of industrial facilities, including crematoriums, without regard to emissions of this carcinogen.

The City, therefore, should use its powers to impose higher restrictions on mercury, dioxin and PM2.5 emissions than currently exist at the provincial level, especially where such emissions affect children and families in residential areas, and impose a similar phase-out of these toxins by 2020 as part of its ‘Change is in the Air’ strategy.

**6. Liability Concerns** – A recent clean-up order by the MOE on the City of the Kawartha Lakes for contamination generated by a third party was upheld by the Ontario Divisional Court, reversing the long-held principle of “Polluter Pays”. The law offices of Blaney McMurtry noted:

“This case should be of particular concern to municipalities whose lands very often are incidentally affected by migrating contamination. In light of the decision, municipalities should gear up to keep close tabs on known contamination issues in lands within their boundaries as well as on ongoing Ministry activity in the area, particularly in cases where there is some question as to the financial means of the polluting party.”

- *Enviro Bulletin* June 2012, Environmental Law Group of Blaney McMurtry LLP

This case highlights an exposure for the City for liability in cases of harmful toxic releases by crematoriums located within City limits. The City can mitigate this risk by siting such facilities in areas zoned for industrial processes involving combustion, incineration, and releases of toxic waste and emissions, and ensuring a separation distance between such facilities and sensitive land uses, especially residential areas. It is particularly important to identify and address such risks from existing aging crematoriums located in close proximity to residential neighbourhoods in Toronto.

Crematorium Working Group – Moore Park, Toronto  
[bettertoronto@gmail.com](mailto:bettertoronto@gmail.com)

*The Crematorium Working Group is a volunteer community-based research group of families concerned about the public health impacts of toxic crematorium emissions, particularly on the health of children.*