

Section 5. PROTECTION OF HEALTH & SAFETY

Environmental conditions, whether naturally occurring or human-made, can result in hazards to human life or health, and damage or loss of value to property. Hazards in the natural environment include flooding, *wave uprush*, unstable soils or steep slopes. Human-made hazards include contaminated sites, former landfill sites and abandoned pits or quarries. In addition, *adverse effects* can be created by noise, odour, vibration, and air or water pollution.

Goal:

To manage natural and human-made hazards in a manner that protects human life and health, avoids adverse effects on living areas and sensitive uses, and avoids, minimizes or buffers sources of pollution so that the quality of life in Kingston will be improved and sustained over the long term.

Policies:

Public Works

5.1. The City and other public agencies must review environmental concerns in the planning and *development* of public works, facilities or *infrastructure*, and avoid any *adverse effects* on *adjacent lands*.

Standards and Regulations

5.2. The City's obligated to support the policies, programs, standards or regulations of senior levels of government or other public agencies with respect to such matters as emissions control, effluent treatment, noise and vibration abatement, well-head protection, and stormwater management.

Development Must Meet Standards

5.3. *Development* proposals whose functional characteristics and environmental impacts are not consistent with environmental standards or objectives of the City, senior levels of government or the Cataraqui Region Conservation Authority, and which cannot be made to conform with generally accepted engineering or design standards or practices, will be refused.

Minimizing Impacts

5.4. Land uses must be separated or regulated to avoid or effectively minimize any potential health and safety threat, or *adverse effects* associated with an adjacent area of hazard or area that creates a potentially damaging emission.

Regulatory Floodplain

5.5. New *development* and *site alteration* in the *regulatory floodplain* is prohibited, except those uses that by their nature must be located within the *regulatory floodplain*.

Erosion Hazard

5.6. New *development* and *site alteration* must be located outside areas that are susceptible to *erosion hazards*, described as including the sum of:

- a.** an amount for toe erosion or the erosion that takes place at the bottom of a slope;

- b. stable slope which can vary from 1:1 for bedrock shorelines to 3:1 for all other situations;
- c. an erosion access allowance of a minimum of 6 metres from the top of the stable slope or 10 metres from the top of the bank, whichever is greater; and,

For the Lake Ontario and St. Lawrence River shorelines, stable slope and erosion access allowances will be defined through consultation with the Conservation Authority.

Wave Uprush

5.7. Certain locations along the Lake Ontario shoreline are subject to *wave uprush*, which is the hazard of strong waves that are capable of sweeping objects or people into the lake and causing property damage during high wind or storm conditions. *Development* is generally directed to lands situated outside areas subject to *wave uprush*.

Natural Hazard Mapping

5.8. The natural hazard area as shown on Schedule 11 indicates the most landward location of the *regulatory floodplain* mapping and *wave uprush* mapping. The Cataraqui Region Conservation Authority should be consulted for additional or updated mapping and information regarding the natural hazard areas, including erosion hazard mapping. Appropriate setbacks in these areas are determined through the application of Ontario Regulation 148/06, as applied by the Conservation Authority. These setbacks will be included in the zoning by-law.

C.R.C.A. Regulation

5.9. Ontario Regulation 148/06, “Development, Interference with Wetlands, and Alteration to Shorelines and Watercourses”, which is administered by the Cataraqui Region Conservation Authority, encompasses all hazardous lands in the City of Kingston referenced in Sections 5.5 to 5.8 above.

Need for Phase 1 ESA

5.10. Where City records or other information indicate that a site may be contaminated by a prior or current use, a Phase 1 Environmental Site Assessment (ESA) that documents prior uses may be required to accompany any application for *development*, land division, or re-use of the property.

Need for Phase 2 ESA

5.11. Where a Phase I Environmental Site Assessment (ESA) indicates that the site may have been contaminated, a Phase 2 ESA, which involves soil and groundwater sampling, is required to confirm and delineate any area of contamination, unless otherwise authorized by the City.

Mandatory Filing of Record of Site Condition

5.12. Mandatory filing of a record of site condition in the Provincial Registry is required for the change of use of a property from industrial or commercial to residential or parkland. Clean-up of contaminated sites must be done in accordance with the “Record of Site Condition Regulation” (O. Reg. 153/04) and with the Ministry of the Environment guideline “Records of Site Condition – A Guide on Site Assessment, the Clean-up of *Brownfield Sites* and the Filing of Records of Site Condition” dated October 2004 or associated guidelines. The City may also request

the filing of a Record of Site Condition when reviewing planning applications for *development* that may be contaminated but do not require mandatory filing.

- Off-site Contamination** **5.13.** If contamination has spread beyond the site, the City requires an Off-Site Management Plan and Remedial Action Plan to be implemented to the satisfaction of the City and the Ministry of the Environment. The Ministry must be notified in cases where contamination has spread beyond the site.
- Development of Former Gas Stations** **5.14.** For *development* applications on former gas station sites, the City requires a Record of Site Condition acknowledged by the Ministry of the Environment. If the same gas station use is proposed to be continued, the City requires a letter of continued use from the Technical Standards and Safety Authority.
- Existing or Former Landfill Sites** **5.15.** No new land use may take place within 30 metres of the perimeter of the fill area of an existing or a former landfill site.
- 5.16.** Any *development* proposal (including severance applications) proposed within 500 metres of the boundary of an existing or former landfill site must be supported by a study to determine *adverse effects* or risks to health. The study must include an assessment of landfill gas and an assessment of the groundwater quality where groundwater is proposed as a drinking water source. If previous studies have confirmed that the influence area of the former landfill site is less than 500 metres, the lesser distance authorized by the City may be used in the study.
- Abandoned Pits and Quarries** **5.17.** Abandoned pits and quarries are shown on Schedule 12. Where an abandoned pit or quarry exists, the City requires *development* applications to be supported by a study undertaken by a *qualified person* that:
- a.** identifies any potential safety hazard; and,
 - b.** demonstrates that the site can be rehabilitated to mitigate the hazard in consultation with the Ministry of Natural Resources.
- Known Mine Hazards** **5.18.** The City is not aware of any significant abandoned mines within the municipal limits. However, should a proponent for a *development* application be aware of an abandoned mine in the vicinity of the site of an application, the proponent is advised to determine the status of sub-surface rights ownership for properties in the vicinity of the abandoned mine, and proponents for such applications within one kilometre of known mine hazards are required:
- a.** to consult with the Ministry of Northern Development and Mines or the Ministry of Natural Resources, as appropriate, and,
 - b.** to conduct an impact assessment to determine whether hazards exist and, if so, whether suitable mitigation can be undertaken to allow *development* to occur.

- Aircraft Noise** **5.19.** No *sensitive uses* are permitted within the 30 Noise Exposure Forecast (NEF) contour of the Norman Rogers Airport or the Gananoque Municipal Airport on the easterly boundary of the municipality. The 30 NEF contour for the Norman Rogers Airport is shown on Schedule 11.
- Noise Study** **5.20.** Any *development* application that proposes the property boundary *sensitive use* between the 25 to 30 NEF contours requires a detailed noise study to the satisfaction of the City. The study must be conducted by a *qualified person* in accordance with Ministry of Environment guidelines, address all sources of noise affecting the site and include recommendations for mitigation to meet the applicable noise criteria.
- Rail Noise** **5.21.** The City requires a detailed noise study for all *sensitive uses* proposed within 500 metres of an active railway to the satisfaction of the City and CN. The study must be conducted by a *qualified person* in accordance with Ministry of Environment guidelines, address all sources of noise affecting the site, and include recommendations for mitigation to meet the applicable noise criteria.
- Vibration** **5.22.** The City requires a detailed vibration study for all *sensitive uses* proposed within 75 metres of a property line for the railway, to the satisfaction of the City and CN. The study must be conducted by a *qualified person*, address all sources of vibration affecting the site, and include recommendations for mitigation to meet the applicable vibration criteria.
- Road Noise** **5.23.** Where *development* of a *sensitive use* is proposed within 500 metres of Highway 401 right-of-way, or within 100 metres of an arterial roadway right-of-way, the City requires a noise study in accordance with Ministry of Environment guidelines that demonstrates how acceptable noise levels can be achieved without the use of noise barriers.
- 5.24.** Any *development* application that proposes a *sensitive use* within 500 metres of Highway 401 right-of-way, or within 100 metres of an arterial or major collector road right-of-way or a future transit right-of-way, requires a detailed noise study to the satisfaction of the City. The study must be conducted by a *qualified person* in accordance with Ministry of Environment guidelines, address all sources of noise affecting the site, and include recommendations for mitigation to meet the applicable noise criteria.
- Noise from Stationary Sources** **5.25.** Any use, including industrial, commercial, institutional or high density residential, proposed to generate a stationary source of noise or vibration may be required to undertake a detailed noise and/or vibration study, to the satisfaction of the City. The study must be conducted by a *qualified person* in accordance with Ministry of Environment guidelines, address all sources of noise and vibration, include recommendations for mitigation to meet the applicable criteria, and ensure that there is no *adverse effect* on an existing or planned *sensitive use*.

5.26. Where a residential use or other *sensitive use* is proposed within 300 metres of a stationary source of noise, the City requires that a noise study be prepared to address the Ministry of Environment noise guidelines. All related means of mitigation are required to be secured prior to approval of *development*.

Air Quality

5.27. The City and other public agencies will have regard to means of enhancing environmental quality through such mechanisms as pollution control, reduction of waste products, conservation of energy, utilization of *renewable energy*, as set out in Section 6.2, and promotion of energy-efficient facilities in the planning and *development* of public works and *infrastructure* expansion.

Groundwater Impact to Wells

5.28. Where study or monitoring of *groundwater features* indicate degradation, the zoning by-law must restrict uses that would cause further degradation. If the study of the groundwater resource has indicated that it is *significant* to the maintenance of a natural resource, such as stream base flow, that function must be protected.

TransCanada Pipelines Limited Requirements

5.29 TransCanada is regulated by the National Energy Board, which, in addition to TransCanada, has a number of requirements regulating development in proximity to the high pressure natural gas pipelines, and related compressor station, as shown on Schedule 3. The requirements include the following:

- a.** the City requires preconsultation with TransCanada or its designated representative for any development proposal within 200 metres of the above-noted facilities;
- b.** activities on or within 30 metres of the right-of-way, such as excavation, blasting and any movement of heavy equipment must be approved by TransCanada;
- c.** no permanent building or structure may be located within 7 metres of the pipeline right-of-way, and a reduction in the 7 metre setback will only be considered if it can be shown to the satisfaction of TransCanada Pipelines that it will not compromise the safety and integrity of the pipeline; and,
- d.** no building, structure or accessory structure is permitted within 3 metres from the limit of the right-of-way.

(Amended by By-Law No. 2011-89, OPA #6)

5.30. Where development is proposed in close proximity to the TransCanada compressor station, a noise and vibration study to be carried out by TransCanada (at the expense of TransCanada) may be required for development proposals within 750 metres of the compressor station in order to determine if provincial guidelines can be achieved, and if necessary, what mitigation measures are required.

