



UNIVERSITY ENDOWMENT LANDS

POLICY

OUTDOOR MECHANICAL EQUIPMENT ON SINGLE FAMILY DWELLING LOTS

Purpose:

The purpose of this policy is to define acceptable location, noise limitations, and recommended mitigation strategies for outdoor mechanical equipment in single family dwelling lots within the University Endowment Lands (UEL). This policy applies to mechanical equipment for new construction and installation of new or replacement outdoor mechanical equipment on single-family lots. Single family lots with multiple units are included in the scope of this policy.

Outdoor mechanical equipment within the scope of this policy includes:

- exhaust fans and vents,
- air conditioning units,
- heating systems and heat pump compressor units,
- emergency generators,
- other types of mechanical equipment that are, in the opinion of the Manager, similar to the foregoing.

Background:

Schedule 6 of the UEL Land Use, Building and Community Administration Bylaw (LUB) states that “no person shall, within the boundaries of the University Endowment Lands, make or cause any noise or sound on a public or private place which disturbs unreasonably, or is likely to disturb unreasonably, the quiet, peace, rest, enjoyment, comfort or convenience of persons in the neighbourhood or vicinity”. The LUB defines acceptable noise limits (Table 1).

Table 1: UEL Acceptable Noise Limitations for Outdoor Mechanical Equipment

Mechanical Equipment	Acceptable Noise Limits	Notes
Emergency Generator	80 dB ¹	Measured at the “point of reception” ² , or at least 6.1 m from source, whichever is greater.
Heat pump or any other mechanical equipment	55 dB daytime and 45 dB nighttime ³	Measured at the “point of reception” ² , or at least 6.1 m from source, whichever is greater.

Application:

Exterior mechanical equipment within the Single-Family Dwelling District (SF-1 and SF-2) are subject to the following additional requirements:

1. Mechanical equipment is not permitted within a required side yard setback.
2. If mechanical equipment is capable of exceeding acceptable noise limitations, a sealed report by a qualified professional is required to certify that noise levels at the point of reception will not exceed limits noted in Table 1.
 - For new construction this documentation is required as part of the Development Permit application.
 - For new or replacement equipment on an existing single-family lot, this information is required when submitting a Building Permit application.

¹ Ref 2.8.4 Appendix 1 of the LUB.

² “Point of reception” means any point on the premises of a person where sound or vibration originating from other than those premises is received. E.g. A second storey window on the nearest neighbouring property. Point of reception must be approved by UEL.

³ Corresponds to Acceptable Continuous Noise Limits. Ref 6.9.3 UEL Block F Design Guidelines, Appendix 3 of the LUB.

3. A sealed report from a qualified professional shall not be required by the Manager if mechanical equipment can generate a noise level above 45 dB but less than 55 dB and the equipment is enclosed within an acoustic enclosure⁴ which is designed and installed for that purpose.
4. If acceptable noise limits cannot be met, then emergency generators must be enclosed within an acoustic enclosure which is designed by a qualified professional and installed for that purpose. Location of the emergency generator must consider minimising the potential noise impact on neighbouring properties.

Additional Information:

Design & Installation Standards: Design and installation of outdoor mechanical equipment is required to be performed by a certified contractor with the appropriate licenses and qualifications. It is the responsibility of the certified contractor to ensure that the design and installation of outdoor mechanical equipment is compliant with manufacturer specifications, applicable editions of the relevant standards and codes, and best practices.

New Construction Development Permit Applications: Applicants must review UEL planning requirements and provide complete and accurate information to reduce potential delays⁵. Information on outdoor mechanical equipment is required as part of a development permit (DP) application and are subsequently included in neighborhood notifications. Missing or incorrect information related to outdoor mechanical equipment has been found to cause delays in the DP process. Changing equipment selection or location during the DP process may trigger a DP amendment and a second neighborhood notification, causing additional delays.

Required Permits: Prior to the installation of outdoor mechanical equipment, application and issuance is required for:

- **Electrical Permit** – where proposed system operates on electricity, or where altering / decommissioning of electrical heating systems is within scope of work, and / or
- **Gas Permit** – where proposed system operates on gas or altering / decommissioning of gas appliances are within the scope of work.
- **Building Permit** - where the installation of the system requires modification of the existing building or included as part of a new construction project or when the outdoor mechanical equipment exceeds the allowable noise limitations in Table 1.

Inspections: Upon completed installation of outdoor mechanical equipment, the certified contractor is required to call for UEL inspection and submit a compliance letter at the time of inspection, confirming that the system has been designed, installed, and commissioned in conformance with the acceptable noise limitations manufacturer's specifications, relevant codes and standards, and best practices.

Heat Pump Installation Guidelines: Several publications and guidelines are available to provide homeowners with guidance on best practice for heat pump installations. Sample guidelines are available on the UEL website.



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⁴ Acoustic enclosures refer to a closed structures built with noise attenuating materials which is engineered, planned and built to reduce, or attenuate noise emitted by specific equipment or machinery.

⁵ See UEL Guide to Development Permits on the UEL website.