

Bulletin

Heat Pumps for Existing Ground-Oriented Dwellings

Effective November 27, 2018

Last amended July 1, 2024

Authority: Director of Planning



1 RELEVANT BY-LAWS AND POLICIES

- Climate Emergency Action Plan;
- Zoning and Development By-law;
- Building By-law;
- Noise Control By-law.

2 BACKGROUND AND CONTEXT

This bulletin provides guidance on applications for permits to install air-source heat pumps in existing ground-oriented dwellings.

For units located in larger multiple dwelling buildings, refer to the bulletin, [Heat Pump Retrofits for Larger Buildings](#).

It is the responsibility of the owner and the licensed contractor to ensure heat pumps are specified and sited to minimize the sound level transmission along property lines as required by the [Noise Control By-law](#).

For general information about heat pumps, please visit [Heat Pump webpage](#). To apply for a heat pump permit, see the [mechanical permit web page](#).

3 GROUND-MOUNTED AIR SOURCE HEAT PUMP APPLICATIONS

Simple Option

An air source heat pump will be considered as outright development in residential district schedule areas, meaning it does not require a development permit application, provided the installation of the heat pump meets the following criteria:

- (a) The outdoor mechanical unit is electric-based, ground-mounted, and an inverter driven variable speed model;
- (b) The mechanical unit is located as shown in section 4, in a location that is least visible or audible to neighbours;

- (c) A maximum of one exterior unit per yard is permitted, except that stacked units (multiple fans) are permitted in the front or back yard if screened from street view by landscape features.

If the above criteria are met, a licensed contractor can:

- apply directly for a mechanical and electrical permit online; and
- apply online for a gas or plumbing permit if altering, adding or decommissioning gas or plumbing appliances are within the scope of work.

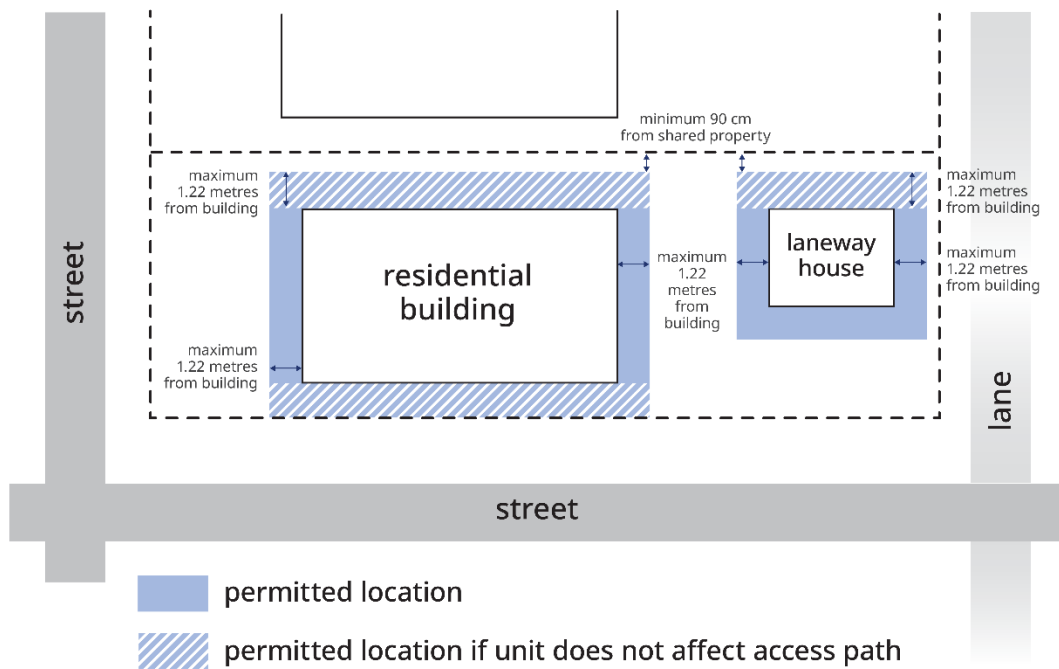
Review Option

Proposals that meet the criteria in (a) but not (b) and (c) can apply for a mechanical and electrical permit online, but it may require further review. To reduce the risk of noise issues, a heat pump with a sound power level of 55 dBA or less is recommended. All installed heat pumps must meet Noise Control By-law 6555 when in operation.

4 SITING

The outright locations for heat pumps on a residential lot are shown in the blue areas in this plan.

Diagram: Outright locations for heat pumps on a residential lot



The exterior unit must not:

- (a) interfere with parking or suite access;
- (b) have condensation outlets that are located to drain onto required pathways;
- (c) be installed on or obstruct any required pathway; or
- (d) be installed within 90 cm of the property line.

Locations outside the blue areas, including balconies and raised decks, can be considered but will require additional review. For more information, contact staff at mechanicalpermits@vancouver.ca.

5 NOTES

If, at any point, the installation does not meet the requirements as outlined in this bulletin, the owner may be required to obtain a development permit or building permit.

For strata buildings, it is the responsibility of the Owner (or Owner's Agent) to obtain written permission from the Strata Council for the installation prior to the commencement of work.

Installation:

- (a) Ensure that the mechanical unit is installed as per the manufacturer's instructions; and
- (b) Electrical load calculations are required as part of the electrical permit and should be completed by the electrical contractor to ensure sufficient service capacity.

6 OTHER APPLICATIONS

Most applications for wall-mounted units will require a review of site location and potential structural impact on the building. A combined Development and Building Permit may be required, in addition to the electrical and mechanical permit.

Heat pumps that extract heat from water (water-source) or from underground (ground-source) require additional review.

For questions about the permit process for installing heat pumps in existing ground-oriented dwellings, please contact staff at mechanicalpermits@vancouver.ca.

For other questions, please [contact the Development, Buildings, and Licensing Department](#). Phone service is available at 311.