



# Policy

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POL.COR.23.XX

## Municipal Construction Waste and Deconstruction

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### Policy Statement

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Buildings are a significant source of greenhouse gas (GHG) emissions. Building-related GHGs are often understood as coming from the energy consumption of building heating, ventilation and cooling systems, lighting, and equipment; however, the carbon content of building materials is often overlooked. The typical demolition of buildings at their end-of-life means that potentially useful materials, which have already incurred GHG emissions from resource extraction, manufacturing and shipping, go to waste in favour of newer materials which incur their own GHG emissions. By using deconstruction instead of demolition, building materials and components can be recovered for future reuse or recycled into new products with lower embodied carbon than new alternatives. According to Canada Green Building Council, construction and building materials represent 10% of Canada's overall GHG emissions.

The Town of The Blue Mountains recognizes the importance of reaching climate mitigation goals and adopting policy that will work towards meeting corporate (Town operations and facilities) and community-wide GHG reduction targets adopted by the Town. Instituting a policy to require deconstruction of Town-owned buildings is one of several policy directions endorsed by Council to respond to the climate change emergency declaration (2019). Deconstructing end-of-life buildings to salvage useful building materials and components is one way to reduce the embodied carbon wherever these materials are used, which may include new Town buildings.

The Blue Mountains Landfill and Recycling Depot accepts household and commercial wastes and runs several diversion programs for various building materials (including shingles, drywall, Portland cement products, wood, and metal). Waste diversion prolongs the useful life of the landfill and defers investment in additional landfill space. Waste diversion also helps avoid the carbon cost of new materials and components by using reused or recycled options that already incurred a carbon cost from resource extraction, processing, manufacturing and distribution.

According to Town of The Blue Mountains' 2023 Solid Waste Tipping Fees (Bylaw 2023-16), Unsorted Commercial, Construction and Demolition Waste has a fee of \$720/tonne compared to Divertible and Sorted Commercial, Construction and Demolition waste which has a fee of \$155/tonne. This difference in tipping fees aims to disincentivize the landfilling of unsorted, potentially recoverable materials.

## **Purpose**

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The purpose of this policy is to establish deconstruction, rather than demolition, as the first option for removal of end-of-life Town-owned buildings, and for Town-owned buildings where any renovations will be undertaken to remove potentially useful building materials.

Investing in the deconstruction of Town buildings will support the Town's efforts to address the climate change emergency, improve waste diversion, and lead by example as an adopter of sustainable best practices. Notable expected outcomes include:

- Increased diversion of reusable and recyclable building materials for future use locally or in other jurisdictions after recovery, corresponding with decreased volume and weight of construction and demolition waste into the Town's Landfill and Recycling Depot;
- Opportunities to reduce the embodied carbon of new Town facilities and/or of other local developments that may incorporate building materials recovered from deconstructed Town-owned buildings; and,
- Local job creation associated with deconstruction and reuse of recovered building materials.

This policy aims to go further than O. Reg. 103/94: Industrial, Commercial and Institutional Source Separation Programs by applying to all Town-owned buildings and by seeking to maximize waste diversion potential. O. Reg. 103/94 s. 8 requires large demolition projects (including one or more buildings with a total floor area of at least 2,000 square metres) to implement a source separation program for the wastes generated. Part IV of the reg. outlines three applicable waste streams: brick and Portland cement concrete, steel, and wood (not painted, treated, or laminate).

## **Application**

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This policy applies to all buildings owned by the Town of The Blue Mountains that are to be removed or receive renovations.

## **Definitions**

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Deconstruction: a process of selectively dismantling a building to recover potentially useful components. Deconstruction minimizes the amount of waste that must be landfilled and generates several streams of diverted materials. Recovered building components and materials are either salvaged for reuse in a future building project or are separated for recycling.

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Recovered materials are not landfilled or incinerated. For this Corporate Deconstruction Policy, a building deconstruction project shall have a waste diversion goal of at least 75%.

**Demolition:** the process of fully removing a building by destroying it with heavy machinery and landfilling most of its building materials and components. A full demolition will result in mixed/unsorted waste loads that must be landfilled. Some demolition projects will include partial deconstruction to salvage only those materials that are easy to capture and of high value (such as appliances and cabinetry, and possibly flooring, windows and doors). These strategies may be referred to as “soft stripping” or “hybrid deconstruction” but still result in landfilling a significant amount of unsorted demolition waste.

**Embodied Carbon:** GHG emissions derived from the manufacturing, transport, installation, use, and end-of-life of building materials.

**Greenhouse Gas:** gases that trap heat in the atmosphere, including carbon dioxide, methane, nitrous oxide, and many more. Greenhouse gases (GHGs) are released into the atmosphere primarily due to fossil fuel combustion, chemicals manufacturing and use (such as refrigerants), and various biogenic processes. GHGs are emitted in the resource extraction, processing, manufacturing and distribution of new building materials and components, but these emissions are avoided when existing materials and components can be reused, and are typically reduced if they can be recycled.

**Recycle:** the process of taking materials diverted from landfill, processing them into one or more raw materials, and then using these raw materials to create new products. Recycling of construction and demolition materials can help avoid the environmental costs of extracting and processing virgin resources to create brand-new building materials and components.

**Renovation:** work on a building that results in the removal or dismantling of some existing building materials and/or components, such as (but not limited to): updating or replacing the building envelope, roof or other structural components; updating flooring, walls, light fixtures, building systems or interior design elements; and/or expanding the building footprint with an addition. For the purpose of this policy and to align with the Municipal Net Zero Emission Buildings policy, a ‘major’ renovation is defined as one affecting more than 25% of a building’s existing footprint.

**Reuse:** the process of taking materials diverted from landfill and using them as-is in a similar application. Reusing materials or components from a building, such as wooden beams, flooring, or light fixtures, can help avoid the environmental costs of resource extraction, processing and manufacturing of brand-new building materials and components. A related concept, repurposing, involves using recovered materials for a different purpose than the original use with minimal processing.

## **Procedures**

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### Tipping Fees

Waste originating from Town-owned building construction, renovation and demolition projects shall be charged all applicable tipping fees and diversion rates as included in the Town's Solid Waste Tipping Fees. The Town's Solid Waste Tipping Fees were originally established in Bylaw 2013-42 and are amended annually. The latest bylaw for 2022 is Bylaw 2022-15.

### Minimum Diversion Target

All building removal/demolition projects and significant renovation projects on Town-owned property must pursue a target to divert at least 75% of building materials and components from landfill by weight, or generate less than 100 kg/m<sup>2</sup> of unsorted (to be landfilled) construction and demolition waste. Divertible materials must include, but may not be limited to, all materials for which there is an active diversion program at The Blue Mountains Landfill and Recycling Depot. Project management staff may choose to establish diversion targets for specific projects that exceed the 75% minimum established by this procedure.

### Performance Contracts to Achieve Diversion Targets

Building removal and renovation projects on properties owned by the Town where a demolition permit is being sought, and which are 100 m<sup>2</sup> or larger in size, must include a performance-based contract to support successful implementation of this policy.

### Construction Waste Management Plans

Significant construction, renovation and building removal projects on properties owned by the Town must include Construction Waste Management Plans.

A Construction Waste Management Plan includes procedures to govern site management, waste collection and storage to contain waste materials to the site, safely manage potentially hazardous materials, and enable deconstruction and diversion activities.

It should be assumed that any deconstruction or demolition project will require a hazardous substance assessment to ensure asbestos or other designated substances are identified, with this information provided to contractors by the project owner (the Town) in accordance with section 30 of the Occupational Health and Safety Act.

### Documentation

Building materials or components diverted from landfill according to the above procedures must be identified by type and weighed. Copies of receipts detailing materials reused, recycled, and landfilled (not including hazardous materials) shall be documented and kept on file. The

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contractor for the project shall provide these records – outlining tonnages, diversion rates and certified records of final destination – to the Town’s Manager of Sustainability and Solid Waste in a report submitted prior to final invoicing.

### **Exclusions**

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Necessary demolitions due to fire, flooding, significant moisture-related damage (e.g. mold, termites) or disaster events which could seriously compromise worker safety and/or the likelihood of recovering useful materials.

### **References and Related Policies**

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The Blue Mountains:

Future Story (2022)

Climate Emergency Declaration (2019)

Energy Conservation and Demand Management Plan (2019)

The Blue Mountains Partners for Climate Protection Declaration (2006)

Grey County:

Climate Change Action Plan (2022)

### **Consequences of Non-Compliance**

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Proposed municipal projects that do not comply with this policy will not receive budget approval.

### **Review Cycle**

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This policy will be reviewed every two years by the Senior Management Team. Any proposed changes will be reported to Council in open session.