

What To Do with Construction and Demolition Materials

Overview

When you throw something “away,” where exactly is “away?” As a King County Resident, “away” is the 920-acre Cedar Hills Regional Landfill located in Maple Valley. The landfill is owned by King County, operated by the Solid Waste Division, and receives over 800,000 tons of solid waste a year. Cedar Hills is the only remaining landfill in King County; once it fills up, waste will have to travel further for disposal, increasing transportation and environmental impacts, and increasing costs for all county residents. So how do you help keep reusable or recyclable materials out of the landfill? One of the best opportunities is smart management of construction and demolition (C&D) materials when building new or remodeling.

Nearly all construction projects - whether building a new structure or embarking on a remodel - produce some quantity of leftover construction and demolition materials as well as wastes like paint cans and insulation scraps. Unless these materials are intentionally handled as recyclable materials they will end up in a landfill. Past research has found that roughly 92% of construction and demolition materials generated in King County have value for reuse, recycling, or as a highly processed fuel source. But this value, and associated cost savings, is only realized if materials are diverted from disposal (it is usually impossible to recycle C&D materials once they have gone into the landfill). Knowing your options and best practices can help you minimize waste, save

money, and keep valuable resources out of the landfill.

Definitions

Construction and Demolition (C&D) Materials

Materials – Result from construction, remodeling, repair or demolition of buildings, roads or other structures. It includes (but is not limited to) wood, concrete, drywall, masonry, roofing, siding, metal, wire, insulation, asphalt, and packaging materials related to construction or demolition.

Deconstruction – *The systematic disassembly of a building, to salvage valuable construction and architectural materials for reuse or to be recycled.*

Transfer Stations – *Facilities where garbage hauling companies, businesses and King County residents can bring their waste. Drop box facilities are smaller facilities where residents and businesses can bring a limited amount of waste. The waste is consolidated at these locations and then transported to the Cedar Hills Regional Landfill for disposal.*

Recycling – *The processing of a material into a new product, which keeps resources in useful circulation and out of landfills.*

When is This Applicable?

King County and Washington State both have requirements related to the handling of C&D materials that permit holders and project contractors should know about and be compliant with. These include the following:



King County

Department of Permitting
and Environmental Review (DPER)

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If you are deconstructing or demolishing a structure, you will need a demolition permit (see [Bulletin #3](#)).

To be compliant with Washington State code (WAC 173-345-040), if a location has a diversion/recycling collection container there must also be a container present for the collection of waste (destined for a landfill).

Knowing where to take C&D materials and what is accepted at these locations will ensure compliance with the [King County Waste Acceptance Rule](#) [disposal].

You and your contractor are required to meet health and safety requirements related to C&D materials [lead/asbestos/safe hauling].

Additionally:

- When planning for any minor or major remodel, deconstruction, demolition, or new project, planning out material quantities carefully in advance, can help you or your contractor more efficiently manage C&D materials, and save time and money during the project.
- During any project, know what to do with C&D materials and identify safe, convenient places to store them for recycling or disposal so they don't get in the way of your project or get contaminated (it typically costs more to dispose of contaminated materials).
- For projects pursuing Built Green or LEED for Homes, you'll need documentation showing how much of the C&D materials were diverted throughout the duration of the project.

What Makes it Green?

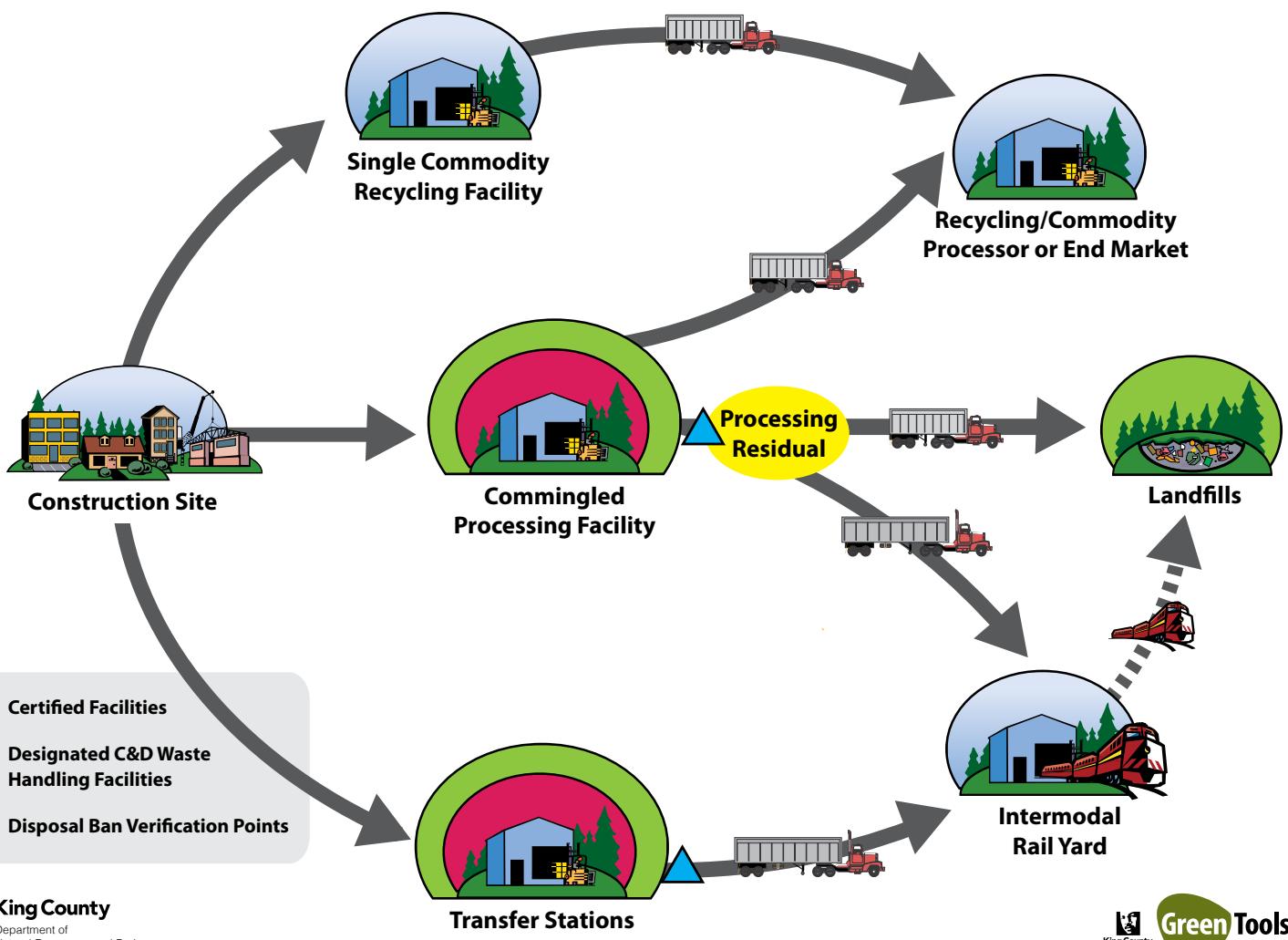
Using just the right amount of materials and recycling or reusing the leftovers is inherently good for the environment and for your pocketbook.

- Reducing the amount of materials used in the first place results in less energy used to harvest and extract raw materials from the earth, and to process and manufacture building products. It also means you spend less to begin with.
- Planning ahead to minimize the amount of waste that is generated and sent to the landfill will save you money in tipping fees. For example, taking cardboard to the recycling bin at transfer stations is free, and taking clean wood to a private transfer station costs \$75/ton, whereas mixed construction debris costs at least \$129/ton.
- Reducing the amount of materials used reduces the need for transportation associated with hauling; this, in turn, reduces air pollution and greenhouse gas production, as well as minimizing impacts on roads and other infrastructure.
- Reusing leftover materials on your next project saves time and money.
- Recycling leftover construction materials further conserves natural resources, extending the life and usefulness of materials.
- If you are pursuing LEED for Homes or Built Green certification for a project, you can earn points based on the amount of materials diverted from the waste stream; the higher your diversion rate, the more points you earn.

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Best Practices

2015 King County Construction and Demolition Materials Management Proposal



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Best practices for minimizing waste generated from construction projects starts with identifying ways to reduce, reuse or repurpose as much of the material as possible **before** exploring options for recycling or disposal. Involve your contractor in the planning process as you consider the following:

Planning:

For whole structure removal, consider alternatives to standard demolition including whole building removal or building disassembly. Review the [King County Building Removal Assessment Guide](#) for resources about building relocation and salvage and deconstruction companies that you can contact to help assess your situation.

- Before beginning your project, consider the types of C&D materials that will be generated, and research different options for minimizing waste, and know in advance where to take materials that you cannot use (see the Resources section, including Salvage options).
- When buying materials, buy only what you need in order to minimize leftover materials.
- State law requires that any time there is a collection container for recyclables a garbage container must also be provided. Plan on having two containers at the jobsite and make sure they are both used appropriately.
- To find place in King County to take your C&D materials, or to find someone to haul them for you, refer to the King County "What Do I Do With...?" database.

- If you plan to have someone else haul your C&D debris, see the [King County/Seattle Construction Recycling Directory](#) for a directory of haulers.

On Site and Hauling:

During your project, have the appropriate number of bins to be able to source-separate major material groups and be sure to properly label those containers. Depending on if you self-haul or hire someone to haul for you, you may be able to co-mingle recyclable construction materials, but keep in mind that source separating always results in higher resource recovery rates, lower fees for getting rid of the material and less landfill-destined materials.



Separating waste onsite helps improve the overall recycling rate and can save you money.



Proper labeling has a big impact on the success of your materials management. Be sure to use multiple languages if you are working with contractors and contractor subs whose first language is not English.

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Some separated materials (ex. cardboard) can be dropped off by King County residents at [Bow Lake](#), [Cedar Falls](#), [Enumclaw](#), [Houghton](#), [Renton](#), [Skykomish](#), [Shoreline](#) and [Vashon](#) transfer stations and drop boxes. Recycling services vary by facility. None of the transfer stations or drop boxes currently accept commingled C&D materials for recycling. Download a printable copy of "[Your Guide to King County Solid Waste Recycling and Transfer Facilities](#)" The Factoria transfer station also offers a [household hazardous waste service](#) for residential customers and pre-approved small businesses. Additional options for recycling C&D materials can be found by looking in the "[What Do I Do With...?](#)" database.

Further best practices include:

- If the materials are something that can be reused, then use them in other projects; ask your contractor to repurpose them, or ask a salvage store if they will take it.
- Small amounts of residential C&D materials are accepted for disposal at King County solid waste transfer stations. Customers using dump trucks, flat beds that dump, or roll-off boxes may not dispose of C&D materials at these transfer stations unless they comprise less than 10 percent of the total volume of the load. (Note: Dump trucks, flat beds and roll-offs with C&D are accepted at the Vashon transfer station.) Other restrictions also apply – see [Your Guide to King County Solid Waste Recycling and Transfer Facilities](#).

Safety Considerations:

- If [asbestos](#) or vermiculite insulation is found, you'll need to ensure you know what can go where. Check "[What Do I Do With...](#)" website to determine where to take materials and quantity limitations. Note that guidance for vermiculite can be found under "asbestos." Contact [Puget Sound Clean Air Agency](#) for permit/info.
- If working in a house built prior to 1978, it may contain lead paint. If you are hiring a contractor, they are required by law to follow safe practices. Although homeowners are not required to follow the same rules, to protect your health and your family's health, follow best practice guidelines.
- Safely hauling materials ([Securing your Load](#)) is not only important, it's the law.

Applicable References/Standards

[King County Waste Acceptance Rule:](#) King County accepts wastes for disposal at County facilities pursuant to this Rule. This Rule promotes governmental efficiency and affords citizens fair notice and process. This Rule is promulgated to preserve and protect the public health, safety, and welfare.

[Secure your load:](#) This is a safety measure, is important for consumers, **and** is an RCW state law.

[King County's Asbestos Fact Sheets:](#)

These links provide helpful information for identification and removal of asbestos.

[Lead Paint Requirements](#) for Salvage/Deconstruction: Outlines legal requirements

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and best practices related to lead paint on salvage, remodel, and deconstruction projects.

DPER Bulletin #3: Demolition Permits for Commercial and Residential Structures

Washington State code (WAC 173-345-040) requires any location with a diversion/recycling collection container to also have a waste collection container (for materials destined for a landfill).

Resources

For the complete King County Green Building Handbook and individual Green Sheet PDF files, please visit our website at: <http://kingcounty.gov/property/permits/publications/greenbuild.aspx>. For additional information, please email dperwebinquiries@kingcounty.gov or call 206-296-6600.

See these related DPER Green Sheets (GS):

- Advanced Framing, GS Number 9
- Green Products, GS Number 7

Salvage Options

Ballard Reuse: A used and salvaged building materials super store.

Dedicated Deconstruction: Provides salvage and deconstruction services

EarthWise Architectural Salvage: Architectural salvage & used building materials resource center.

Second Use: Salvaged building materials, deconstruction and salvage services company.

The Habitat Store: features building salvage materials and donation pick ups from your next project.

Recycling Resources

King County/Seattle Construction Recycling Directory:

This guide attempts to gather the essential information that a construction and demolition contractor working in King County needs at the jobsite to greatly minimize the amount of materials leaving their jobsite as waste.

What do I do with...: King County's interactive website allows you to indicate the materials you are looking to recycle/dispose of and provides location contact information for many sites.

LinkUp: The LinkUp program may have resources for you or your contractor to help determine what you can recycle and where. There are many links to numerous resources.

Built Green and **LEED** are third party verification programs that help ensure projects are built.

Permit Tips

You will need a permit if you are doing any substantial deconstruction or demolition. If more than one structure will remain, you will need to provide a site plan as part of your application. Speak with a Permit Review Coordinator for clarification. See **DPER Bulletin #3**.

