

From: "Mochrie, Paul" <Paul.Mochrie@vancouver.ca>
To: "Direct to Mayor and Council - DL" <CCDTMACDL@vancouver.ca>
Date: 8/19/2016 1:26:41 PM
Subject: Construction & Demolition Waste Recovery
Attachments: [ENG - Memo to Mayor and Council - C&D Waste Recovery.pdf](#)

Dear Mayor and Council,

Please see attached pdf of Memo from Jerry Dobrovolny, GM - Engineering Services, providing Council with information on work being led by Waste Management and Resource Recovery to investigate the potential for developing a construction and demolition (C&D) recovery facility at the Vancouver Landfill, with a specific focus on wood waste.

A brief summary of the memo is as follows:

- The Landfill receives about 130,000 tonnes per year of C&D waste, the majority of which is wood waste
- Some C&D waste is used at the Landfill for building roads, regrading and installing gas works
- The Majority of the C&D waste is used to regrade the Landfill's Western 40 to prepare it for closure.
- To assist with advance planning, we have retained a consultant to review recovery opportunities for marketable materials.
- The concept currently being explored is to continue receiving material with the addition of sorting, processing and marketing.
- Following completion of the consultant's work later this summer, we plan to begin pilot testing for the purposes of informing a business case and design for a full scale solution.
- We are engaging with staff from Metro Vancouver and the Corporation of Delta.
- This work is aligned with the Greenest City Action Plan's Zero Waste Priority and the Regional Solid Waste and Resource Management Plan.

If you have any questions or would like additional information about this zero waste initiative, please feel free to contact Albert Shames, Director of Waste Management and Resource Recovery at 604-873-7300.

Thanks,
Paul

Paul Mochrie | Deputy City Manager
City of Vancouver | 453 W 12th Avenue
Vancouver | BC V5Y 1V4
604.873.7666 | paul.mochrie@vancouver.ca



CONFIDENTIALITY NOTICE: This message and any accompanying documents contain confidential information intended for a specific individual and purpose. This message is private and protected by law. If you are not the intended recipient, you are hereby notified that any disclosure, copying or distribution, or the taking of any action based on the contents of this information, is strictly prohibited.



ENGINEERING SERVICES
Jerry Dobrovolny, P.Eng.
City Engineer / General Manager

VanRIMS No.: 01-9000-20

MEMORANDUM

August 19, 2016

TO: Mayor and Council

CC: Sadhu Johnston, City Manager
Paul Mochrie, Deputy City Manager
Janice MacKenzie, City Clerk
Lynda Graves, Manager, Administration Services, City Manager's Office
Rena Kendall-Craden, Director, Communications
Mike Magee, Special Advisor, Mayor's Office
Kevin Quinlan, Chief of Staff, Mayor's Office
Katie Robb, Director, Communications, Mayor's Office
Emma Lee, Director, Community Relations, Mayor's Office

FROM: Jerry Dobrovolny, General Manager of Engineering Services

SUBJECT: Construction & Demolition Waste Recovery

The purpose of this memo is to provide Council with information on work being led by Waste Management and Resource Recovery (WMRR) to investigate the potential for developing a construction and demolition (C&D) recovery facility at the Vancouver Landfill (Landfill), with a specific focus on wood waste.

The Greenest City Action Plan's Zero Waste Priority Action 4.2 speaks to increasing the diversion of wood waste from landfill and incineration by increasing reuse and recycling opportunities. The Regional Solid Waste and Resource Management Plan (ISWRMP) has set diversion goals that rely on increased diversion of C&D waste, and specifically wood for increased reuse, recycling and energy recovery in the form of biofuel.

The Landfill receives about 130,000 tonnes per year of C&D waste from across the region. The majority (about 90%) of the C&D waste received is wood, of which about 30% is "clean" - unpainted and untreated waste wood. Some C&D waste is used as a construction material for building roads, regrading fill areas and installing landfill gas works. Currently however, the majority of the C&D waste received is used being to regrade the Landfill's Western 40 hectare

City of Vancouver, Engineering Services
320-507 West Broadway
Vancouver, British Columbia V5Z 0B4 Canada
tel: 3-1-1, Outside Vancouver 604.873.7000
website: vancouver.ca



area to prepare it for closure. This 40 hectare area is scheduled for closure over three years from 2017 to 2019. Although some C&D waste will continue to be needed for Landfill construction projects, without expanded efforts towards diversion the majority will go for disposal.

To assist with our advanced planning, we have retained a consultant to review recovery opportunities for marketable materials from C&D loads received at the Landfill and provide system design recommendations. The primary material of value in the C&D waste is the “clean” untreated and unpainted wood. Recovering clean wood along with other potentially recyclable materials requires a combination of manual and mechanical sorting.

The concept currently being explored involves continuing to receive loads of mixed C&D waste at the Landfill, running that material through a sorting facility, recovering wood and recyclables, shredding the wood portion to produce biofuel, and providing the recovered materials to market for highest, best use. End use markets being explored for biofuel, include district energy systems and local cement kilns. We are also monitoring research being conducted at the University of British Columbia into new options for reusing and recycling waste wood.

The scale and complexity of C&D material recovery facilities (MRFs) vary widely. One option may be to develop a MRF at the Landfill similar to the Zanker C&D Recycling Facility in San Jose, California (www.zankerrecycling.com/zanker-facilities/). However, in the near term we are proceeding in a phased manner to ensure marketability of product(s) with pilot scale, mobile equipment options.

Following the completion of our consultant’s work later this summer, we plan to begin pilot testing the effort required to recover and process C&D materials to meet market specifications, for the purpose of informing a business case and design for a full scale solution. The pilot is expected to run for approximately four to six months. Next steps include product specification development, equipment selection and sourcing, and learning from leading practice C&D recovery facilities. We are engaging with staff from Metro Vancouver and the Corporation of Delta on this initiative and have received strong support.

If you have any questions or would like additional information about this zero waste initiative, please feel free to contact Albert Shames, Director of Waste Management and Resource Recovery at 604-873-7300.



Jerry W. Dobrovolny, P. Eng., MBA
General Manager of Engineering Services

(T) 604.873.7331

(E) jerry.dobrovolny@vancouver.ca