



Erosion, Sediment and Dust Control Plan

Stratford General Hospital - Avoncrest Building

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1.0 Introduction

This erosion, sediment and dust control plan has been designed for the demolition of the Avoncrest building located at 86 John St S, Stratford. This document gives direction to Budget Demolition employees and subcontractors regarding sediment and dust mitigation on the site. It has been prepared in accordance with the Occupational Health and Safety Act and Regulations (OHSA) and other applicable regulations.

This plan defines the steps that will be taken to reduce erosion, sediment and dust emissions including track out, excavation, grading and all other potential nuisances and hazards related to the work.

During the demolition work, Budget Demolition employees will comply with OHSA and other applicable regulations.

Any emission complaints will be documented on the Health, Safety, Environmental Report Form and will be submitted to the Budget Demolition project management team.

2.0 Erosion and Sediment Control Plan

Water-induced soil erosion is caused primarily by rain events causing surface water runoff. The process involves detachment of soil materials, transport of soil materials, and deposition of eroded materials. Runoff from construction sites can contribute significant sediment loads to receiving water. Thus, effective erosion and sediment control at construction sites are crucial in stormwater management. Good planning is the first step in preventing sediments from damaging the receiving water ecosystem. However, it is equally important to ensure erosion and sediment control measures are correctly installed and maintained on site.

The typical steps of erosion and sediment planning are identification of problem areas, selection of erosion and sediment control measures, and preparation of document and drawings (if applicable). The intent is to minimize the degree and duration of disturbed areas by stabilizing areas as soon as possible.

By staging construction and preserving existing vegetation, erosion can be reduced significantly. Once a land surface is disturbed, we are to minimize the duration of exposure by protecting it from erosion, if possible. If an area is not going to be worked on in more than 45 days, demolition work should then be delayed until the time is more appropriate.

Sediment control devices to be used onsite include:

- Sloping
- Silt fencing
- Storm inlet traps

1. Areas of exposed erodible soil during earthwork operations shall be shaped to permit storm runoff with minimum erosion. Temporary berms, slope drains, diversion mounds and sedimentation basins, shall be required where possibilities for water pollution exist and permanent erosion controls are not completed or operative.

2. Silt fences shall be required around the perimeter of each work area to prevent sediment from entering wetlands or open water.

3. Storm inlets shall be protected from sediment laden runoff which may clog underground storm sewers. High discharge velocity at a storm outfall may cause significant erosion downstream.

3.0 Potential Sources of Dust Emissions

Work site operations have the potential to generate emissions in the form of fugitive dust, vehicle, or equipment emissions. Potential sources of emissions from the demolition work site may include the following:

1. Demolition Operations:

Wrecking, moving or dismantling materials of or within the building, cut-off saw operations, disjoints or stripping of materials. This includes any debris generated from the above activities.

2. Construction Traffic:

Movement of equipment and vehicles in and around the work site can generate emissions. There is also potential for vehicular traffic on paved and unpaved roads or parking lots to produce dust emissions.

3. Site Preparation and Foundation Work:

Excavation of foundations and footings, grading, backfilling operations can produce both fugitive dust and vehicle emissions.

4. Material Stockpile:

Demolition debris, excavated soil, broken concrete and/or material stockpiles may contribute to dust emissions. Wind erosion of areas disturbed during demolition activities.

5. Site, Clean-up, and Grading:

Backfilling, grading, and re-vegetating of the excavated areas may produce both fugitive vehicle and dust emissions.

4.0 Mitigation Measures

The following mitigation measures will be implemented onsite for dust and nuisance emissions:

1. Site Functions

- Fencing/barriers erected to isolate and secure the work site.
- Site layout-dust causing activities should be located away from sensitive areas as best as possible.
- All employees will be trained and responsible for implementing the plan.
- Competent site supervisor on site during work areas to carry out inspections and confirm compliance with this plan.
- Implement and enforce haul routes (where possible)

2. Construction Traffic

- No idling onsite
- Damping down of haul routes and vehicle cleaning as required.
- Every load entering or exiting the site must be covered.
- Minimize where possible construction traffic onsite.
- Effective cleaning of haul routes and strict enforcement of appropriate speed limits around the site.

3. Demolition Operations

- Use of water as a dust suppressant, as needed. No chemical means (other than water) will be used to suppress dust and particulates without engineer's prior written approval.
- Cutting equipment to use water as a suppressant for dust and/or have a suitable exhaust capture/ventilation system.
- Minimization of drop heights where possible and securely cover materials outdoors which may generate dust.
- Operations will occur in accordance with the noise by law.
- Power tools used by employees that generate noise above 85dB are identified with a sticker to communicate to the worker that hearing protection is mandatory. Employees are to follow the Hearing Conservation Safe Job Procedure.
- The operation of any equipment in connection with Construction is prohibited in residential areas from 1900 to 0700 in accordance with the City By-Law.

4. Work Site Functions

- Conscious minimization of dust generating activities.
- Use of water as dust suppressant where needed.
- Enclose stockpiles of materials.
- Cover stockpiles to prevent wind whipping, where possible.
- Provide dust tight screens or partitions to localize dust generating activities and for protection of workers, finished areas of work and the public.
- Cleaning of the road pavement and sidewalks for the entire frontage of the property, as required.
- Work trucks leaving the site will be cleaned of all loose soil and dust from demolition debris including the sweeping of exteriors and tailgates by a designated laborer, as required.

5. Waste Management

- Waste storage and disposal areas will be monitored to minimize the re-dispersal of dust to the air during storage, loading or unloading.
- If required, provide dust tight screens or partitions to localize dust generating activities and for protection of workers, finished areas of work and the public.

5.0 General Methods of Dust Control

Methods to control fugitive dust and vehicle emissions include:

1. Track-out Prevention

Materials will be dismantled and removed from the site in a strategic fashion to ensure the removed materials stay on hard surfaces to prevent track out of mud and dust. If track out occurs, a skidsteer with sweeper attachment will remove the fugitive dust and dirt.

2. Traffic Control

Fugitive dust emissions from construction traffic traveling on unpaved or paved surfaces will be controlled with the following mitigation measures:

1. Unpaved roads in the demolition site will be watered, if required, prior to the start of personnel or equipment (other than water trucks that are actively spraying water to control dust) traveling on the unpaved surfaces. The frequency of watering can be reduced or eliminated, as appropriate, during periods of precipitation.
2. No vehicle will exceed 15 kilometres per hour within the work site.

3. Paved portions of the construction site will be suppressed down more frequently as necessary to control windblown dust and dust generated by vehicle traffic. Streets adjacent to the construction site will be wetted down as necessary to remove accumulated dust and soil from operations.
4. Vehicle trips will be reduced, if necessary.

3. Off-site Transport

All vehicles that are used to transport material and that have the potential to cause visible dust emissions will be provided with a tarp cover. Materials will be wetted as required during loading. Trucks carrying loose soil will be covered before they leave the construction site, and on-site vehicle speeds will be limited to 15 km/h or lower in unpaved demolition areas.

Vehicles will be monitored to ensure that they are tarped and to remove any excess material on the shelf or exterior surfaces of the cargo compartment. All off-site haul trucks will enter and exit the site via paved access roads and established gravel pads.

4. Excavation and Slab Removal Activities

Excavation and slab removal activities will be visually monitored daily for production of fugitive dust. Water will be applied as required to the point of removals to minimize visible dust.

Soil will be pre-wetted prior to excavation to reduce visible dust. Additional water will be added during removals, material handling, and loading. Active excavation areas will be wetted as required during dry weather.

- The height from which excavated soil is dropped onto either stockpiles or dewatering pads will be minimized.
- Backfill material will be covered or enclosed when not actively handled at the site.

5. Loading

Fugitive dust emissions from loading operations will be controlled by ensuring that all excavated material is adequately wetted during the process.

Loading activities during periods of sustained strong winds, such as hourly average wind speeds of 40 km/h or greater will be not allowed unless a clear

plan can be put in place to ensure the loading activities do not conflict with this plan.

6. Material Stockpiles

Fugitive dust emissions from storage piles will be controlled by using a temporary cover, water or a MOECC approved dust control agent.

6.0 Site Monitoring

Any complaints with regards to dust suppression or noise will be documented on Budget Demolition's Health, Safety, Environmental Incident Form.

All complaints will be addressed immediately, where possible. Corrective action will take place within 24 hours.

Budget Demolition's Project Manager and Site Supervisor will ensure compliance with the provisions of this plan.

1. Visible Dust During Site Activities

The goal of this plan is no visible dust. While Budget Demolition understands that soil disturbance and excavation activities, by their very nature, will produce dust; site controls will be used to mitigate visible dust as it is generated to achieve the no visible dust goal.

This section defines the steps that must be taken toward achieving the goal of no visible dust from soil disturbance or excavation in terms of the amount of time permitted to address visible dust plumes. The criteria in this section apply to an active work site when equipment and personnel are driving on the site and performing work site activities.

The "initial observation" starts the clock for the required response measures described below in this plan. The "initial observation" is the time any of the following personnel observe visible dust:

- (a) workers who are disturbing soils or excavating for the permitted activity
- or
- (b) client/owner representative, Project Managers, site supervisors, or consultants with responsibility for monitoring the permitted activity.

2. Visible Dust Crossing the Property Boundary

In the event visible dust from soil disturbance or excavation is observed crossing the property boundary, the following procedures will be followed to ensure adequate mitigation measures are in place to suppress the dust:

1. The specific source of the emissions will be shut down, without delay and a more aggressive application of the existing mitigation measures will take place.
2. Once the mitigation measures have been implemented, the source of emissions will resume, and it will be verified by the site supervisor that the mitigation measures were successful.

3. On-Site Visible Dust

In the event visible dust from soil disturbance or excavation is observed on-site, but does not cross the property boundary, the following procedures will be followed to ensure adequate mitigation measures are in place to address the dust emission:

1. A more aggressive application of the existing mitigation measures or additional methods of dust suppression will be directed to the specific source of the dust emissions within 60 minutes of the initial observation.
2. If despite these more aggressive and/or additional measures the visible dust emissions continue for 90 minutes from the time of the initial observation, the specific source of emissions will be temporarily ceased until the implemented dust control mitigation is effective or, due to changed conditions, is no longer necessary.

4. Windblown Visible Dust During Inactive Periods

The standards in this section apply on weekends and holidays or any other times when no equipment and personnel are performing work activities on the work site. On weekends and holidays the site will not be monitored by Budget Demolition personnel.

In the event of complaints or notifications received of windblown visible dust plumes from soils or other materials originating from the project site, mitigation measures described in Section 4.0 will be applied as soon as possible. Mitigation measures will be applied until the visible dust plumes originating from the work site are minimized or eliminated.