

**Risk Management Health and Safety Plan**  
**200 Lees Ave**



**uOttawa**

L'Université canadienne  
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## **1.0 INTRODUCTION**

### **1.1 Purpose**

The purpose of this Risk Management Health and Safety Plan (HASP) is to provide health and safety information to people working at, or otherwise involved at, 200 Lees Ave. This Risk Management HASP sets out responsibilities; establishes personnel protection standards and mandatory safety practices and procedures; and provides for contingencies that may arise during various site activities which may potentially involve encountering impacted subsurface soils and groundwater at the site. This Risk Management HASP forms part of the University of Ottawa's policies and provides guidance for developing project-specific HASPs.

### **1.2 Applicability**

The provisions of this plan are applicable to any activity at 200 Lees Ave including but not limited to non-construction related excavation, landscaping, utility servicing, exterior building maintenance, groundskeeping (gardening, grass cutting, snow clearing), riverbank and erosion protection maintenance, soil cover maintenance, intrusive investigations, research, teaching activities and sports activities. Construction activities will require a project specific Risk Management Health and Safety Plan.

This Risk Management HASP does not address the confined space programs, asbestos management programs or other hazardous materials/designated substances programs as they are covered in separate University-wide programs.

This Risk Management HASP for 200 Lees Ave is supplemental to any existing University of Ottawa risk management, environmental health and safety policies and procedures. Where there is a conflict between this document and any existing policies and procedures, this document will supersede.

### **1.3 Target Stakeholders**

Target stakeholders for this Risk Management HASP include University of Ottawa employees (faculty and support staff), students, maintenance workers (indoor and outdoors), contractors, and visitors (including facility and recreational users).

### **1.4 Organizational Structure and Responsibilities**

The Ontario *OH&S Act* sets specific duties to all workplace parties. Everyone has a general duty to make sure that the Act and all its regulations are complied with. They also have the duty to take every precaution reasonable in the circumstances to protect workers. Therefore, they must ensure the safety of everyone and implement necessary mechanisms to assess, control, and monitor hazards or potential hazards.

Complete roles and responsibilities according to Ontario regulatory requirements are addressed in the Ontario *OH&S Act* and associated Regulations.

### **1.5 Reporting of Accidents and Unsafe Conditions**

Any employee or student who is aware of a health or safety problem on University of Ottawa premises has an obligation to report it. A problem which is essentially of a maintenance nature should be reported (by the employee, the employee's immediate superior, or a member of the Functional Occupational Health and Safety Committee (FOHSC)) to Physical Resources at 613-562-5800 ext. 2222. Serious accidents or incidents and emergencies should be reported to Protection at 613-562-5411.

**NOTE: the full 10 digits of the phone number must currently be dialed, even for Protection Services**

#### *Problems in the area where the employee normally works*

In accordance with the established Terms of Reference for Health and Safety Committees, for a problem in the area where the employee normally works, the matter should be reported to the employee's immediate superior. The superior will deal with the matter and may, if appropriate, contact Physical Resources (in the case of a problem of a maintenance nature) or report the matter to the person designated as responsible for the building, or may inform the employee that no action appears necessary.

After the problem is corrected, the employee's immediate superior shall send a brief written report of the health and safety problem, and the steps taken to correct it, to one of the chairs of the appropriate FOHSC, to the FOHSC member representing the area in question and to the employee who reported the problem.

If the employee who reported the health and safety problem is not satisfied that the problem has been adequately dealt with, the employee should report it to the FOHSC member representing the area in question or to any other member of the relevant FOHSC.

#### *Problems outside the area where the employee normally works*

A problem outside of the area where the employee normally works should be reported to one of the chairs of the FOHSC responsible for the building in question, if the problem is of a local nature. Problems concerning areas outside of specific buildings should be reported to one of the chairs of the Protection and Physical Resources FOHSC. In the case of a more general problem which may extend beyond the territory covered by a particular FOHSC, or a problem which may concern University wide issues or may have policy implications, it should be reported to a member of the overall University Occupational Health and Safety Committee. If the problem is of a maintenance nature, it can be reported directly to Physical Resources.

Personnel are required to report any and all health and safety incidents to their immediate supervisor as soon as practically possible. The immediate supervisor may be the particular Project Manager or Office Manager. Regardless of how small the incident is, it is essential that it is reported and treated promptly.

*Hazard Reporting Procedures*

Hazard Reporting Procedures are also to be undertaken in conformance with the *Hazard Reporting Procedure for the University Community* (2010) accessible at [http://www.uottawa.ca/services/ehss/documents/hazardreporting2010\\_003.pdf](http://www.uottawa.ca/services/ehss/documents/hazardreporting2010_003.pdf)

## **2.0 EMPLOYEE TRAINING ASSIGNMENTS**

### **2.1 General**

All workers (employees and contractors), supervisors, and students working on site who may be exposed to hazardous substances, health hazards, or safety hazards require training before they engage in activities could expose them to hazardous substances or safety or health hazards. Employees will not be permitted to participate in or supervise field activities until they have been trained to a level required by their job function and responsibility.

In general terms, a variety of courses are offered in compliance with University Policies 72, 77 and 91 available on the University of Ottawa website. All employees are required to attend mandatory training sessions related to their work environment.

### **2.2 Employee, Management and Supervisor Training**

It is the responsibility of employees, supervisors, directors and deans to identify training needs within their work areas.

Training with respect to the Risk Management HASP is required for personnel (workers and supervisors) who are expected to work in or near open excavations or at other activities where disturbance of subsurface (> 0.15 meters depth) soils is expected, and should consist of a brief overview of site conditions and the precautions required during maintenance activities.

### **2.3 Refresher Training**

All employees, and supervisors will receive refresher training as required by material changes in site conditions.

## **3.0 RISK MANAGEMENT STRATEGY**

### **3.1 Background**

This plan is based upon the findings of a number of consultant reports. In particular a Human Health and Ecological Site Specific Risk Assessment was completed, peer reviewed, and accepted by the Ministry of the Environment **which found that the site does not pose material human health or ecological risks**. Copies of the reports are available for review at the Office of Risk Management.

The issues at the site originate from historic landfilling operations and from a historic coal gasification plant located off-site. The site was formerly a City of Ottawa landfill which was operated between 1906 and 1947, and which received mainly ash, cinder and other burnt waste from the former Lees Avenue incinerator located to the west of the site. It is possible the site may have received domestic waste as well. The site was developed for use as an educational facility in the early 1960s.

A former Ottawa Gas Co. coal gasification plant was present immediately adjacent to the site at a location currently occupied by the Southeast Transitway pumping station and associated parking lot. Some coal tar residues were reportedly encountered during the construction of the Transitway in the mid-1980s. The pumping station operated by OC Transpo collects and treats impacted groundwater. Residues associated with free phase coal tar and impacted groundwater have been detected on the campus property.

The previous investigations indicated that polycyclic aromatic hydrocarbons (PAHs) and heavy metals were present in the campus soil, riverbank soil, nearshore sediments, and groundwater at concentrations greater than the MOE *Guideline for Use at Contaminated Sites in Ontario* (MOE Guideline), which was applicable at the time of the investigations. The reports indicate that the distribution of these contaminants does not appear to be concentrated in any one area.

### **3.2 Overview of Risk Management Strategy**

No significant risks or precautions were identified for site activities such as research, teaching and sporting activities. Any digging activities must follow the protocols outlined below.

### **3.3 Exterior Building Maintenance**

Exterior building maintenance activities including painting; window repair, replacement and cleaning; brick work repair, etc. do not require additional health and safety precautions. In the event that repairs to building foundations are required where excavation deeper than 0.15m may be required, the precautions applicable to utility workers (Level C or D in Table 3-1) should be applied.

### **3.4 Precautions for Maintenance Workers**

To reduce the risk to any maintenance workers at the site a number of precautions will be implemented:

- Minimize exposed skin area (use of gloves)
- Minimize time on site performing subsurface excavation work
- Use of partial face particulate respirators when dust cannot be controlled or active excavation is being performed
- Dust reduction

In general, landscape and utility workers should wear a dust mask, minimize hand to mouth contact, and wear gloves since ingestion rates are partially based on hand to mouth contact.

Where excavation to depths greater than fifteen centimeters depth is expected, a project-specific health and safety plan, which takes into account the findings of the previous environmental investigations at the site, should be developed.

#### ***Groundskeeping***

Unless subsurface fill materials will be disturbed such that dust is generated, routine groundskeeping activities such as grass cutting, snow clearing and light gardening do not require additional precautions beyond the standard University of Ottawa health and safety requirements. However, any gardening activities involving disturbance of soils in areas where there is no layer of topsoil present (greater than 0.15 metres thick) should follow Level D requirements in Table 3-1 below to limit contact with potentially impacted fill materials.

#### ***Construction Activities***

Construction activities that are undertaken by uOttawa staff shall have a project specific Risk Management Health and Safety Plan developed by the Office of Risk Management. Construction activities undertaken by contractors shall have a project specific Risk Management Health and Safety Plan which they develop and the Office of Risk Management approves as is discussed further in Section 5.0. These project specific plans will take into consideration the scope of the project and be based on this document as the minimum standards.

#### **3.4.1 Management of Excavated Soils**

When excavating into the subsurface, care should be taken to segregate the clean fill from the underlying cinder and ash fill when stockpiling excavated soils. It should be expected that the top 0.15 meters of soil will be clean fill or topsoil, and any soils below that potentially impacted cinder and ash fill. Unless gross evidence of contamination is observed (e.g., coal tar, free product hydrocarbons) or engineered fill (e.g., Granular "A") is required to backfill the excavation



for geotechnical or other reasons, excavated soils, including the cinder and ash fill, can be placed back into the excavation. To maintain the original stratification of soils and fill as much as possible during backfilling, excavated soil, including the cinder and ash fill, should be placed back into the excavation in the reverse order in which it was removed, i.e., cinder and ash fill should be backfilled first, followed by clean fill or top soil. However, to minimize relocation of potentially impacted soils, excavated soils and fill should not be excavated from one area of the site and used as backfill in another part of the site.

Disposal of any excess soil should be co-ordinated through the Office of Risk Management.

### **3.4.2 Personal Protective Equipment (PPE)**

#### ***General***

The proper use of PPE will minimize exposed skin and the inhalation/ingestion of dust. PPE that will adequately protect employees from the hazards and potential hazards associated with encountering potentially impacted subsurface soil and groundwater during maintenance activities should be selected. PPE selection should be based on an evaluation of the performance characteristics of the PPE relative to the requirements and limitations of the site, the task-specific conditions and duration, and the hazards and potential hazards identified at the work site. The level of protection provided will be increased when site conditions deem it necessary to reduce employee exposures to below permissible exposure limits and published exposure levels for hazardous substances.

#### ***Levels of Protection***

All activities involving active excavation into the fill layer will be initiated at Level C, as described in Table 3-1.

#### ***Respiratory Protection***

Each employee and contractor who wears, or may have to wear, respiratory protection must be trained, fit tested, and declared medically fit to wear the specific respiratory equipment prior to engaging in activities that may require respiratory protection. With respect to Level C requirements, when air purifying respirators are required, full facepiece or half-mask respirators, with high efficiency dust cartridges, should be used. Respirators belong to, and are only used and maintained by, the individual to whom they have been issued.

#### **3.4.2.1 Personal Protective Equipment Program**

Details of the PPE Program for the 200 Lees Ave Risk Management HASP are summarized in Table 3-1.

**Table 3-1 Protective Equipment for On-site Maintenance Activities**

Action Level	Level	Protective Equipment
When dust cannot be controlled or when active excavation is being performed greater than 0.15 metres, or when entering a crawl space.	C	<ol style="list-style-type: none"> <li>1. A minimum of a NIOSH-approved P-100 mask<sup>1</sup></li> <li>2. Safety glasses or chemical splash goggles<sup>2</sup> (as required)</li> <li>3. Hooded chemical-resistant clothing (overalls; two-piece chemical-splash suit; disposable chemical-resistant overalls)</li> <li>4. Gloves, outer, chemical-resistant</li> <li>5. Gloves, inner, chemical-resistant</li> <li>6. Boots (outer), chemical-resistant steel toe and shank<sup>1</sup> (as required)</li> <li>7. Hard hat<sup>1</sup> (as required)</li> </ol>
When dust is controlled, and when excavation greater than 0.15 metres depth is open but active excavation is not being performed.	D	<ol style="list-style-type: none"> <li>1. Coveralls</li> <li>2. Work Gloves</li> <li>3. Boots/shoes, chemical-resistant steel toe and shank. (as required)</li> <li>4. Safety glasses or chemical splash goggles<sup>1</sup> (as required)</li> <li>5. Hard hat<sup>1</sup> (as required)</li> </ol>
Non-intrusive groundskeeping activities such as gardening, grass cutting and snow clearing where fill materials are not disturbed.	N/A	No additional precautions beyond standard University of Ottawa health and safety requirements

Notes: 1. Unless indicated otherwise thru the Designated Substances Report for the specific area of the crawlspace being entered.  
 2. Optional and as per University of Ottawa general health and safety requirements

**3.4.3 Minimizing Time on Site Performing Subsurface Work**

It is recommended that landscape workers should not spend more than 3.5 years working in open excavations at the site. This assumes that the same landscape worker is on site 8 hours a day, 32 days a year (or 256 hours/year). This also assumes that the landscape worker is not in contact with soil more than 0.3 metres deep.

It is recommended that utility workers should not spend more than 10.3 years working in open excavations at the site. This assumes that the same utility worker is on site 8 hours a day, 10 days per year (or 80 hours/year). This also assumes that the utility maintenance worker is not in contact with soil more than 2 metres deep.

**3.5 Maintenance and Monitoring of Soil Cover**

To further reduce potential risks to landscapers who may be in contact with shallow soils the following will be done:

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- Maintaining at least 6 inches (0.15 metres) of imported topsoil in all non-paved areas to reduce the potential for seasonal, repeated contact with the impacted fill
- Landscaping with low maintenance features that require little tending or using landscape features that require little tending or using landscape features such as paving stones or boulders
- Placement of additional clean topsoil on grassed areas and re-sodding promptly if bare spots are noted to minimize dust generation during grass cutting

As part of an annual inspection of engineered controls at the site, the following routine monitoring and maintenance activities should be conducted:

- Garden beds should be assessed for average depth of topsoil or clean fill over the ash and cinder fill layer, and if found to be less than 0.15 metres thick, additional topsoil should be placed as part of comprehensive landscaping services;
- Bare spots in otherwise grassed areas should be re-sodded as described above; and
- Areas of the site where grass is not well established and is mowed should be identified and reseeded annually, preferably in the early fall (mid-August to mid-September) as recommended by Environment Canada <sup>2</sup>.

### **3.6 River Bank Maintenance and Soil Erosion**

Care should also be taken not to cut grass adjacent to the river bank too short, as this may cause the roots to wither from exposure. The roots hold the soil in place, and where there is no more vegetation, riverbank soils can be quickly washed into the river.

Another cause of increasing erosion is storm water catch basins. If not cleared regularly, they often fill up with sand and grit, causing rain water to spill onto the surrounding area, putting pressure on the shoreline through additional erosion. Any storm water catch basins near the shoreline should be inspected monthly, and cleaned out as required, to ensure they are functioning properly.

In the future, to prevent additional erosion, any recreational trail constructed at the top of the riverbank should have a hard surface, not bare earth.

### **3.7 Fence Maintenance**

A fence has been installed along the tree-line adjacent to the Rideau River shoreline to limit access to the river's edge. This fence should be inspected annually, and repaired as required to prohibit access to the shoreline.

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<sup>2</sup> <http://www.qc.ec.gc.ca/ecotrucs/solutionsvertes/lawncare.htm>

### **3.8 Risk Management Plan Monitoring**

#### ***Purpose***

It is anticipated that monitoring of risk management measures will mirror the regular workplace inspections. The purpose of the risk management measures inspection will be to determine if the prescribed risk management practices and procedures are being followed.

## **4.0 COMMUNICATIONS AND OTHER NOTIFICATION REQUIREMENTS**

### **4.1 General**

Under the *Occupation Health Safety Act*, employers are obligated to provide the following:

- Provide to the appropriate Health and Safety committee or to a health and safety representative the results of a report respecting occupational health and safety that is in the employer's possession and, if that report is in writing, a copy of the portions of the report that concern occupational health and safety;
- Advise workers of the results of a report referred to in the previous bullet and, if the report is in writing, make available to them on request copies of the portions of the report that concern occupational health and safety. and
- Where so prescribed, provide a worker with written instructions as to the measures and procedures to be taken for the protection of a worker.

### **4.2 Notification of a Project**

In conformance with the above, prior to the implementation of a project which may result in the disturbance of subsurface soils and/or groundwater, the employer and supervisor must provide a worker who will be working near or at the work site with written instructions as to the measures and procedures to be taken for the protection of a worker. This document can be used to meet these requirements.

## 5.0 CONTRACTOR AND THIRD-PARTY HEALTH AND SAFETY PLANS

Contractors working on the property can be considered to be “employers”, “supervisors” and “workers” under the Ontario *Occupational Health and Safety Act*. Before activities begin, the contractor must develop its own health and safety plan and have it approved by the University of Ottawa staff. The University of Ottawa will provide a copy of this site-specific Risk Management HASP, but this is not a substitute for an independent HASP by the contractor, as required by the University of Ottawa for the work to be conducted. The contractor must agree to comply with at least the minimum requirements of this Risk Management HASP, its own site-specific HASP, and general University health and safety requirements, as well as being responsible for the health and safety of its own employees. The contractor must agree that it will take any additional measures it deems necessary to meet at least minimum applicable health and safety standards if unforeseen circumstances arise. The contractor will also provide at least minimum safety equipment as required by the site-specific Risk Management HASP. When respirators are necessary, the contractor will provide a respirator fit test certificate and a physician's "fit for respirator use" declaration.

The University of Ottawa may require evidence of the following health and safety training/documentation from its contractors:

- Contractor employees must have appropriate training (i.e., either a 40-hour or 24-hour OSHA-required [29 CFR 1910.120] health and safety course for hazardous waste work may be required, or certified equivalent training).
- Personnel must have appropriate personal protective equipment (PPE) and training for the specific job.
- Equipment and field operations must meet applicable safety standards and satisfy the University of Ottawa's field inspection. Unsafe equipment or operations will necessitate shut down of the job at a cost to the subcontractor.

