

SUMMARY OF SOIL MANAGEMENT PLAN REPORT
YORK TRUNK SANITARY SEWER AND PAISLEY-CLYTHE FEEDERMAIN PROJECT
February 5, 2016

BACKGROUND

Phase 2A of the City of Guelph's York Trunk Sanitary Sewer and Paisley-Clythe Feedermain project includes land along the north shore of the Eramosa River that was part of a waste disposal site used from 1935 to 1958. The wastes placed there include cinders, ash, brick, pieces of glass and porcelain, household waste, lumber, charred wood, metal, wire and pieces of fabric. Soil and groundwater quality were tested where construction will occur to help plan for managing excavated materials. The work is detailed in the report "York Trunk Sewer and Paisley-Clythe Watermain Phase 2A Soil Management Plan," Nov. 2015, prepared for the City of Guelph.

SOIL AND GROUNDWATER TESTING

Testing was conducted from April to June 2015. Measured levels of chemicals in 30 soil samples and 10 groundwater samples were compared to Ontario's standards. The standards used are intended for residential, parkland or institutional land where the local groundwater could be used as a drinking water source.

Soil samples were taken from as deep as 10m, which is more than the thickness of the landfill. Soil was tested for general chemistry, metals, petroleum compounds, polychlorinated biphenyls (PCBs) and polycyclic aromatic hydrocarbons (PAHs).

Groundwater samples were collected from across the area and where soil testing showed the highest potential for groundwater impacts. Materials tested in groundwater were similar to soil, with a few differences based on how chemicals behave in the environment.

TEST RESULTS

The soil and ground water conditions along the construction route are as expected for a historical landfill, with chemical types and concentrations varying between locations. In most locations, concentrations of some chemicals were greater than the Ontario standards. The main areas containing industrial waste are:

- the west limits of the construction route at Wyndham Street South from approximately 100 m east of Gordon Street for a distance of approximately 280 m and
- the central area of construction, from the area at Hooper Street to approximately Waterworks Place.

In some locations, soil beneath the waste material contained elevated levels of some metals, but this soil is more than 1.5m below the surface where exposure to animals, plants and people is unlikely.

MANAGEMENT OF EXCAVATED MATERIALS

The new services will be installed in clean fill, with controls to reduce the potential for future impacts from the waste that remains in other areas. One or two trenches will be excavated through the former landfill using a method that minimizes the size of the excavation. This method is preferred when variable soil types are present.

All excavated material (30,000 m³, or about 12 Olympic-sized swimming pools) will be disposed of off-site, mostly as solid, non-hazardous waste, although some may require management as hazardous waste. Materials will not be stockpiled on site, which will reduce potential for dust and odours. Dust and odour generation will also be managed by limiting the size of open excavations and how long they are left open, and by adjusting work schedules based on wind and other weather conditions.

The contractor must have a soil management plan that includes vehicle access, site management, dust control, odour control, control of groundwater, worker health and safety, and spill response. The contractor's performance will be monitored by experienced project managers, supported as needed by technical specialists.