ENVIRONMENTAL TESTING AND RESULTS

GOLDIE MILLS AND JAMES WOLFOND PARK WEST

The City of Guelph retained the services of environmental professionals to test the soil and groundwater quality at this property, as some environmental impacts were considered feasible, given the historical activities identified. Specifically, the Goldie Mills property was formerly utilized as a sawmill and for other manufacturing activities, including a foundry, a cooperage, a distillery, a piggery and a tannery. The Joseph Wolfond Park West property was formerly utilized for furniture manufacturing operations.

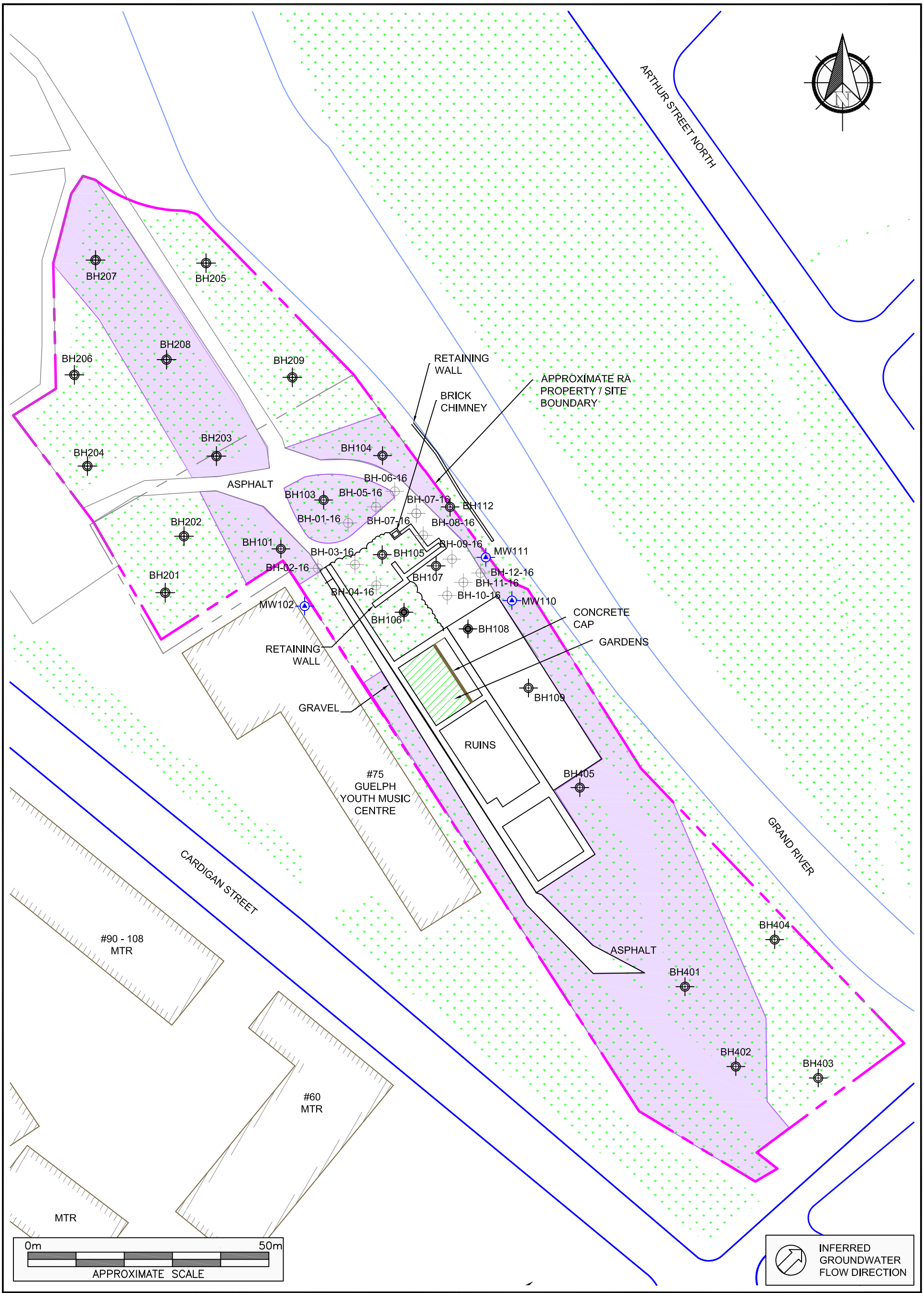
The soil testing identified concentrations of parameters typically associated with the former manufacturing activities, including petroleum hydrocarbon (PHC)-related compounds, polycyclic aromatic hydrocarbons (PAHs) and metals. The majority of impacts were found in deeper soils, more than 2.5 feet (0.75 m) below the surface, but there were also impacts identified in shallower soils. There were no impacts identified in groundwater.

To address the shallow soil impacts, an environmental risk assessment was completed to evaluate the potential adverse health effects that humans and animals may experience when coming into contact with these compounds. The results indicated that there may be adverse health effects to recreational park users that may inadvertently ingest or come into contact with soil. However, it should be noted that the risk assessment included overly conservative assumptions to be protective of all sensitive sub-populations. For example, it was assumed that a typical person will visit the Site for 1 hour per day, 5 days per week, for 39 weeks (during non-winter months when the ground is not frozen), every year of their life, and ingest soil on every single occasion.

Marginal adverse health effects were also identified for plants and wildlife that may reside or forage on the Site, and from erosion of soil into the adjacent Speed River.

As a result, additional capping of the soil at certain locations will be completed so as to prevent future and long-term exposure to the subsurface impacts. Capping will consist of either a hard or fill cap in areas identified on the attached figure. A hard cap includes any “hard” barrier that would prevent penetration of the ground surface, such as asphalt, concrete, interlocking stones, etc. A fill cap includes a “soft” barrier that would act as a suitable blockade between the surface and the underlying soil impacts, and would limit the potential for contact with soil impacts, such as the placement of clean soil, gravel, wood chips, play sand, etc. A filter fabric will be placed between the soil impacts and the overlying fill cap, to act as a visual indicator of where the underlying soil impacts are located.

With the implementation of additional soil capping at the areas of concern, there would be no potential adverse effects to human health or the environment from exposure to the subsurface impacts in soil, and park use can continue as usual.



LEGEND

- PINCHIN BOREHOLE LOCATION (2017)
- BOREHOLE LOCATION (ENGLOBE, 2016)
- PINCHIN MONITORING WELL LOCATION (2017)
- APPROXIMATE EXTENT OF ADDITIONAL HARD/FILL CAP REQUIRED

PROJECT NAME	SCREENING LEVEL RISK ASSESSMENT
CLIENT NAME	CITY OF GUELPH
PROJECT LOCATION	139 CARDIGAN STREET AND 70 NORWICH STREET EAST, GUELPH, ONTARIO
FIGURE NAME	APPROXIMATE EXTENT OF ADDITIONAL HARD/FILL CAP REQUIRED
FIGURE NO.	9
APPROXIMATE SCALE	AS SHOWN
PROJECT NO.	205063
DATE	MARCH 2018