

Wilket Creek Channel within Wilket Creek Park Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure, and Geomorphic Systems and Habitat Study

Creating a long-term plan for the management of Wilket Creek

The Wilket Creek (within Wilket Creek Park) Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure and Geomorphic Systems and Habitat Study is being undertaken by Toronto and Region Conservation Authority (TRCA), on behalf of the City of Toronto. The aim of the project is to develop a long-term management plan for Wilket Creek that takes account of natural processes, wildlife habitat and public amenity. In particular, the project will protect infrastructure at risk of erosion, including exposed manholes, pedestrian bridges and pathways while working with natural channel processes.

Why are we developing the Master Plan?

- Significant storm events from 2000-2008 caused major damages to the channel and local infrastructure
- After the August 19th, 2005 event the City of Toronto identified 26 areas of concern relating to infrastructure
- Infrastructure included bridges, pathways, manholes and sanitary sewers
- The City requested that TRCA assist in developing and implementing an interim repair and stabilization program while the City secured funds for a large scale study
- Following the temporary repair efforts, additional damages occurred during subsequent storm events
- The ongoing erosion and infrastructure damages confirm the need for having a better understanding of channel processes

What will be the outcomes?

- The Master Plan will identify what work is required to stabilize this section of Wilket Creek
- Habitat and channel process issues will be incorporated into the plan
- Works will likely be limited to sections with an eye to the long-term vision for the creek
- Alternative solutions will be developed that will take into account the environmental, social and economic ramifications to ensure negative impacts of any works are minimized or eliminated

How do the proposed Emergency Works fit in?

- Three high-risk areas have been identified where infrastructure is at risk for failure if left as-is for a significant length of time
- These sites are 3, 6 and 7 and involve the exposure of the sewer
- Site 3 is subject to large debris jams during storm events which puts the bridge at risk
- Due to the risks, these sites have been 'fast-tracked' as emergency works locations
- The emergency works have been designed within the context of the Master



Wilket Creek Channel within Wilket Creek Park Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure, and Geomorphic Systems and Habitat Study

Creating a long-term plan for the management of Wilket Creek

What are the issues along Wilket Creek?

- An increase in water volume due to stormwater run-off from the urban area has resulted in bank erosion and an widening channel. In order to create a more stable channel that is suited to larger flows, a larger channel is required.
- Bank and bed protection measures that have been previously installed have been undermined and out-flanked during high flow events.
- City of Toronto infrastructure, including sewer pipes and manholes, have been exposed as a result of creek bed erosion.
- Pedestrian bridges have been undermined.
- There are opportunities to improve in-stream habitat conditions for aquatic organisms



Wide, shallow channel with minimal habitat.



Failed gabion baskets and valley slope erosion.



Erosion at temporary bridge repairs.



Erosion threatening a pedestrian bridge.



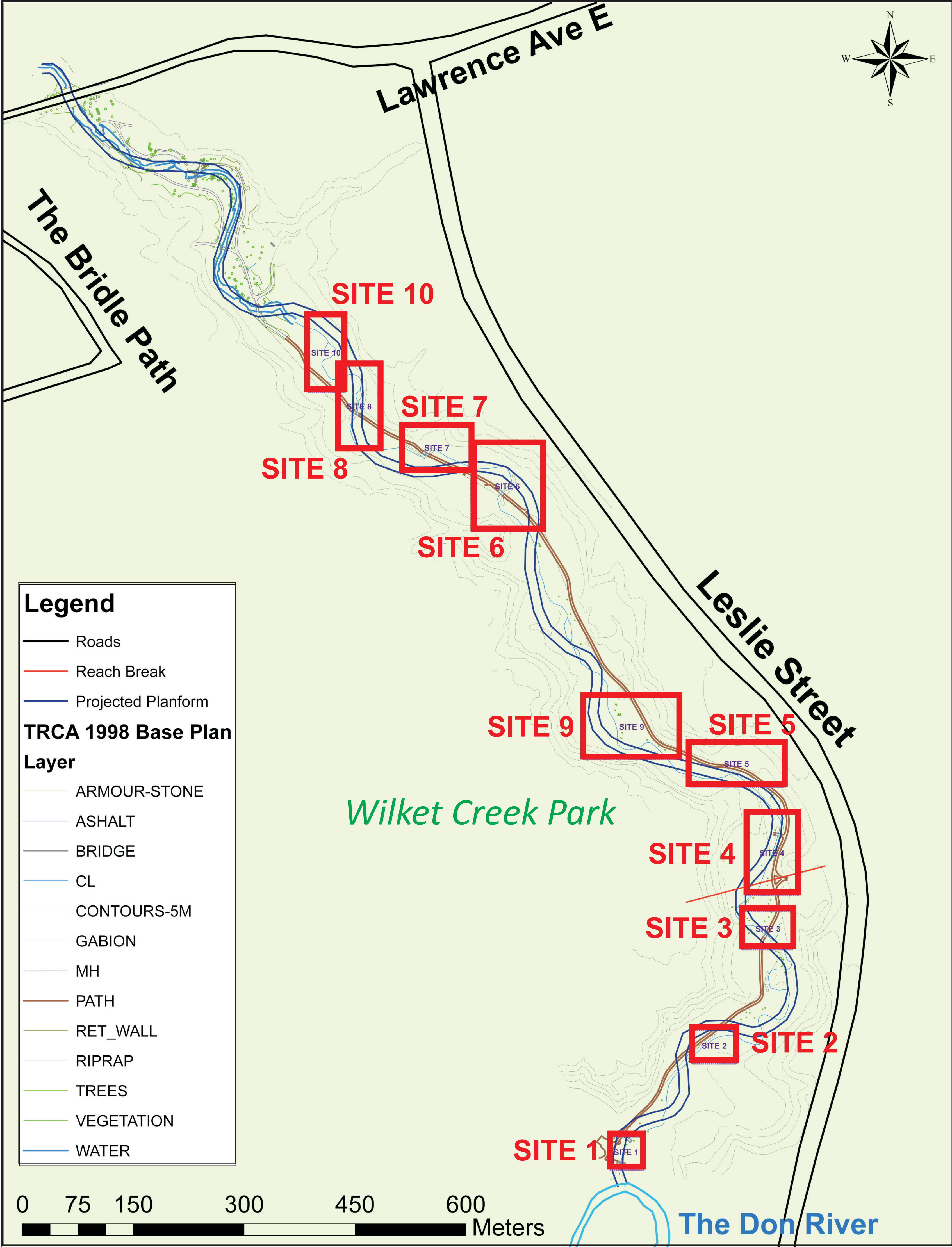
Widening channel and exposed infrastructure.

Wilket Creek Channel within Wilket Creek Park Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure, and Geomorphic Systems and Habitat Study

Creating a long-term plan for the management of Wilket Creek

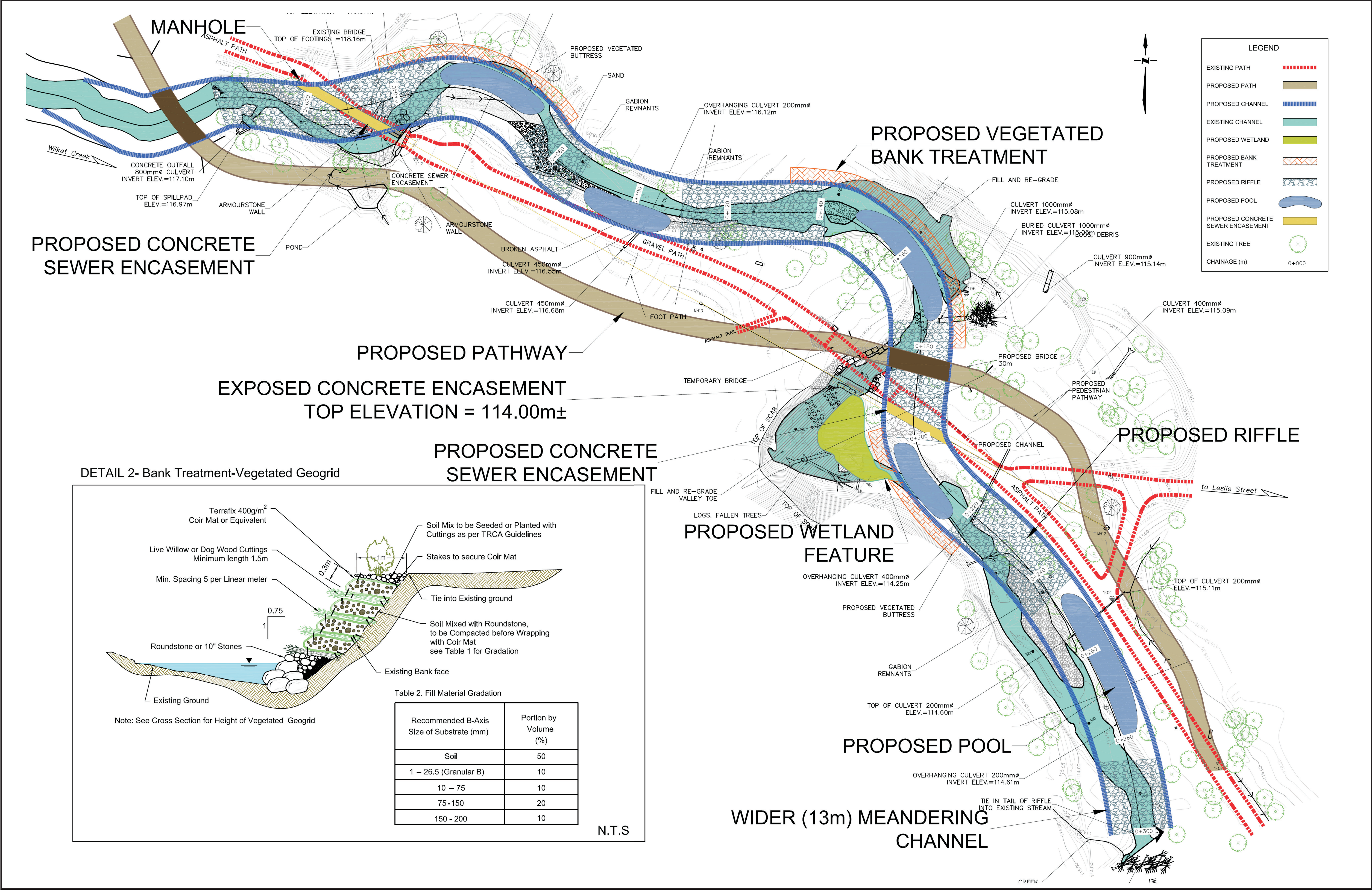
What are we planning in Wilket Creek Park?

- The map shown below depicts Sites 1 through 10 located within Wilket Creek Park.
- Each priority site is related to infrastructure which is in a state of jeopardy due to channel migration/erosion.
- The map also depicts the overall vision of the channel planform as part of the long-term configuration of the creek. Within this context, current and future restoration plans are being developed.



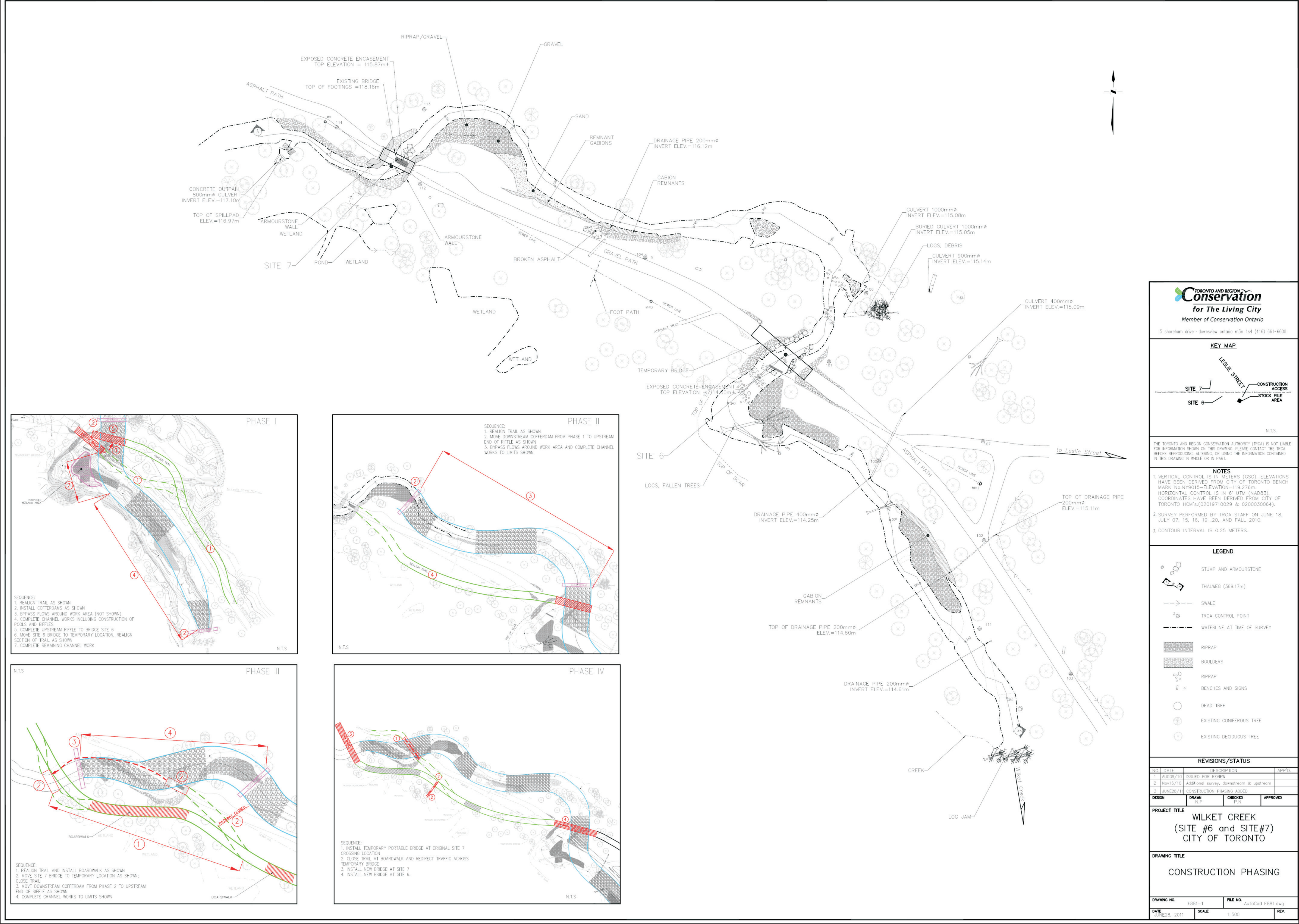
Wilket Creek Channel within Wilket Creek Park Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure, and Geomorphic Systems and Habitat Study

Creating a long-term plan for the management of Wilket Creek



Wilket Creek Channel within Wilket Creek Park Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure, and Geomorphic Systems and Habitat Study

Creating a long-term plan for the management of Wilket Creek



Wilket Creek Channel within Wilket Creek Park Rehabilitation Study to Address Erosion Hazards Threatening Infrastructure, and Geomorphic Systems and Habitat Study

Creating a long-term plan for the management of Wilket Creek

