UPPER THAMES RIVER
CONSERVATION AUTHORITY
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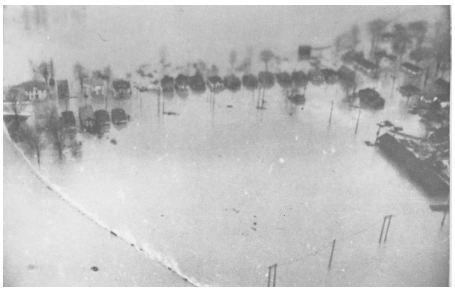
The West London Dyke

The City of London's flood protection dykes are earthen barriers built along stretches of the Thames River and the North Thames River in London. The dykes help to protect people and properties in areas that would otherwise be at significant risk of flooding. Early settlements on the banks of the Thames River experienced several floods, such as the July 1883 flood that claimed 17 lives. Rather than moving away from the river, the response was to build a dyke system.

Construction of the West London Dyke, the first of the City's eight dykes, began in the late 1880s. By the early 1900s, the dyke had been reinforced, extended, and raised at least twice. The April 1937 Flood overtopped the reinforcements and flooded the communities behind the dyke. In 1947, the dyke on the North Branch was overtopped again, although flooding was not nearly as severe as in 1937.



April 1937 Flood: Looking south at Tecumseh (Labatt) Park. The dyke along the North Thames cuts across the photo in the lower left; Riverside Drive is across the top.

April 2008 Flood: Looking south along the North Thames towards the Forks of the Thames and Labatt Park.

The dyke, in conjunction with other components of the Upper Thames River Conservation Authority (UTRCA) flood control system, has protected the Blackfriars, Petersville, and Cavendish areas from flooding during many more recent events, including in 1977, 2000, 2008, 2009 and 2018. In addition to structural flood control measures (dykes, dams and channels), the UTRCA undertakes hazard mapping and modelling to identify and assess flood risks, and provides flood forecasting and warning services for watershed municipalities.

October 2018: Looking south at the reconstructed dyke along the North Thames. Harris Park is on the left; Labatt Park is in the distance.

Today, the West London Dyke is 2.4 km long and rises 8-9 m above the river bed. It runs along the west bank of the North Thames River from Oxford Street to the Forks of the Thames, and then west along the main Thames River to Cavendish Park, west of the Wharncliffe Road bridge. The City of London owns the dyke and the UTRCA undertakes major maintenance as part of its flood control program.

Studies have determined that parts of the aging dyke system are unstable, subject to river erosion, and do not protect to the Regulatory Flood standard. The Blackfriars, Petersville, and Cavendish floodplain area has been identified as one of the City's most vulnerable areas for flooding and potential climate change flood impacts. It is estimated that without the dyke, total damages today from the Regulatory Flood (based on the April 1937 flood) would exceed $65,000,000.

A Master Repair Plan Environmental Assessment, completed in 2016, outlines a 20 year reconstruction plan for the West London Dyke. Four phases of construction have been substantially completed, with funding support from the City of London, the Province of Ontario (Water and Erosion Control Infrastructure Program), and the Government of Canada (National Disaster Mitigation Program). This work, between the Queens Avenue Bridge and Blackfriars Bridge, has raised the dyke to the current Regulatory Flood elevation and improved the dyke to current design standards.

For Phases 5 to 13 of the West London Dyke Reconstruction Project, the Government of Canada is contributing up to $10 million through the Disaster Mitigation & Adaptation Fund. The City of London will provide the remainder of the funding for the $25 million project. The UTRCA is managing the project in partnership with the City.

The project work for Phases 5 to 13 includes the reconstruction of approximately 1,600 metres of the West London Dyke, from Blackfriars Bridge north to Oxford Street West, and from the Forks of the Thames west to Cavendish Park.

Prior to the current rehabilitation efforts, the dyke protected approximately 1200 structures and 2600 people in the Blackfriars, Petersville, and Cavendish floodplain area to just less than the Regulatory Flood. Once all the upgrades are completed, the dyke will protect this area to the Regulatory Flood standard, reducing risks from flooding and improving the City's climate change resiliency.

February 2018 Flood: North Thames River along an old section of the dyke near Oxford Street West.

Reconstructed section of the West London Dyke north of the Forks in October 2017 (above) and during the February 2018 flood (below).

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