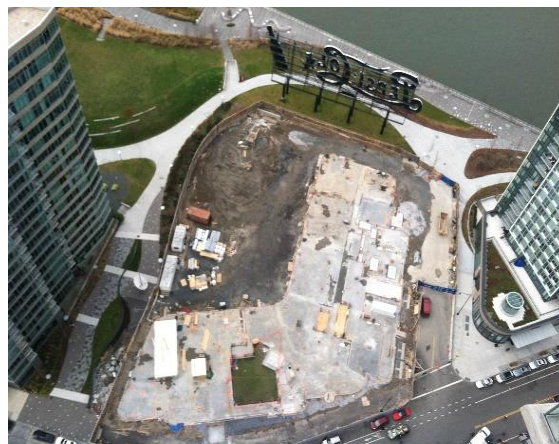


Queens West Development – Stage 2

Long Island City, New York

The Queens West Development site (QWD Site) is a 21-acre area located along the East River and part of the 78-acre Hunters Point waterfront tract in Long Island City (Queens), New York. The Site was part of the Hunter family farm in the early 1800s before the property changed use to industrial and manufacturing operations. In the late 1800s through mid-1900s, the property was used for crude oil refining, gasoline and oil production, tin can manufacturing and industrial sanitary chemical product manufacturing. The QWD Site is divided into five operable units. All five units were originally enrolled in the New York State Department of Environmental Conservation Voluntary Cleanup Program (NYSDEC VCP). Two operable units were later entered into the NYSDEC Brownfield Cleanup Program (BCP). FLS was



Aerial view of a portion of the QWD Site.

contracted as the lead environmental consultant to navigate the project through the VCP and BCP. FLS served as QWD's environmental consultant. In this role, FLS acted as QWD's agent overseeing the work of other environmental firms, ensured that investigation and remedial goals were achieved, and acted as a liaison between QWD, other environmental firms, NYSDEC, and QWD counsel. Ultimately, FLS kept the environmental work on track in order to achieve closure with NYSDEC so that development could proceed.

FLS oversaw the Remedial Investigation (RI) to delineate petroleum-related contamination that resulted from the historic oil refinery operations. Results of the RI found soil and groundwater heavily contaminated by petroleum-related compounds, such as benzene, toluene, ethylbenzene and xylenes, as well as contaminants associated with urban fill. The Site was also impacted by petroleum-related Light Non-Aqueous Phase Liquid (LNAPL).

FLS oversaw implementation of the Remedial Action Work Plan, which formulated the Site remedy consistent with the planned development consisting of multiple mixed-use commercial and residential high-rise buildings. The Site remedy included excavation of contaminated soils (source removal); groundwater remediation consisted of enhanced biodegradation of dissolved phase contaminants using Oxygen Release Compound Advanced®.



View of one of the Site's high-rise residential building post-remedy.

During remediation, FLS tracked excavation and soil disposal, monitored underground tank removal, inspected the remnants of a concrete foundation for gross contamination prior to offsite disposal, and oversaw high-vacuum extraction and removal of LNAPL. FLS also oversaw construction of the Engineering Controls, including a 300-foot-long subsurface barrier wall, permanent vertical steel sheeting and vapor barriers, and active sub-slab depressurization systems to prevent the infiltration of soil vapors at each of the buildings. Each operable unit achieved closure qualifying the BCP units for tax credits. The Site has since been developed with high-rise residential buildings with commercial space on the ground floor, parking areas, courtyards, walkways and parks, a ball field, and landscaped areas.