

# Reopening existing culverts

## Project Summary

**Title:** Wandle Park River Restoration

**Location:** London Borough of Croydon, England

**Technique:** Providing ecological and landscape enhancements through daylighting a culverted urban watercourse

**Cost of technique:** £££££

**Overall cost of scheme:** ££££££

**Benefits:** ££££££

**Dates:** 2009- 2013

## Mitigation Measure(s)

Remove culverts

Increase in-channel morphological diversity

## How it was delivered

Delivered by: Croydon Council

Partners: Environment Agency, Heritage Lottery Fund, The Mayor's Help a London Park scheme, Friends of Wandle Park, Royal HaskoningDHV, LDA Design



New ornamental bridge over the deculverted River Wandle through Wandle Park All images © Royal HaskoningDHV copyright and database rights 2013

## Background / Issues

Wandle Park is a seven hectare urban park near the centre of Croydon in south London. The park is popular with dog walkers, joggers, skate boarders, cyclists and families with children. The River Wandle, a tributary of the River Thames, runs through the park but it was culverted in the 1960s and the original channel in-filled predominantly with building waste. Croydon Council sought to improve the amenity and environmental nature of the park as part of wider regeneration plans for the local area, and deal with the contaminated land issues typically associated with a green space located centrally in a town space.

Wandle Park was one of ten parks in London that were improved under the 'Help a London Park' scheme. This project was a key opportunity to create river and wetland habitat in an urban context and re-establish the park as an area of high quality green space for public enjoyment, whilst contributing to reduction of flood risk.



Layout of the park during the early stages of scheme construction

## Step-by-step

Works consisted of:

- Diversion of the River Wandle.
- Removal of the previous culvert.
- Placement of a 300 mm capping layer of topsoil on the banks to prevent contaminated material from entering the watercourse.
- Diversion of a 900 mm Thames Water pipe.
- Excavation of 28,000 m<sup>3</sup> of soil as well as dealing with the high quantities of contaminated ground.
- Construction of flint walls to complement the existing Victorian flint walls.
- Building of two river control structures at the culvert inlet and outlet to the Park with trash screens, erosion control measures and landscaping.
- Landscaping of 50,000 m<sup>2</sup> of park.
- Play area works and recreating, through different types of paving, the abandoned River Wandle route.
- Construction of new ponds, footpaths and a pedestrian bridge over the river.
- Resurfacing existing footpaths and car park.
- Refurbishment of an existing Victorian fountain.



Clockwise:

- (1) Looking downstream from culvert at eastern end of park;
- (2) earthworks adjacent to the watercourse;
- (3) construction of amenity access routes;
- (4) excavation and landscaping of banks around downstream culvert

## Benefits

- 300 m of the River Wandle have been deculverted and a semi-natural watercourse created, improving the environment for aquatic invertebrates – a post-construction river survey found improvements in aquatic invertebrates.
- Landscaping elements of the scheme have been designed to draw people to the watercourse, creating a new community resource.
- Community allotments created on the site.
- The River is now used as an educational resource, with attendance from school groups.
- Historic features from the 19th century park, including the bandstand, have been restored.



## Lessons Learnt

- The aim of the project changed as the original aim (flood alleviation) was found to only achieve limited benefits. The scheme was successfully re-envisioned as a river restoration scheme to realise both water body ecological status and wider community benefits.

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