

Greenslade Reserve

Flood mitigation



Flood mitigation

Sand carpet development

Partnerships

Setting

Northcote in Auckland has experienced recurring stormwater flooding, driven in part by historic and ongoing urban development that has modified the natural alignment and function of the Awataha Stream. Sections of the stream have been diverted and piped, reducing natural floodplain capacity and altering flow dynamics across the catchment.

The stream corridor passes through Greenslade Reserve, where a single soil-based sports field occupied a low-lying area. This location is inherently prone to water accumulation, and the field presented poor drainage performance, with frequent periods of waterlogging following rainfall events. During significant storm events, limited storage capacity and constrained flow paths contributed to downstream flooding impacts within the Northcote town centre and surrounding residential areas.

Response

A multifaceted transformation of Greenslade Reserve was undertaken to:

- improve water quality and drainage
- reduce flooding within the Northcote town centre
- enhance the playing surface (increasing playing capacity) and associated amenities for community use
- reconnect the community with the natural environment through a native planted wetland.

These works formed part of the wider Awataha Greenway Project and the regeneration of Northcote's town centre.

1. **Scope:** lower the playing field by 1 metre (establishing a basin), daylighting and redirecting stormwater infrastructure and constructing a sand carpet sports field with integrated drainage and irrigation, established in couch grass (warm-season grass).
2. **Partnership:** a collaborative approach involving Auckland Council, Kaipātiki Local Board, Auckland Urban Development Office (formerly Eke Panuku Development Auckland), Northcote Development (Kāinga Ora), mana whenua, and local stakeholders
3. **Completed:** late 2022/early 2023

Impact and lessons learnt

Integrated design: The project demonstrates how stormwater management, recreation, and ecological restoration can be successfully combined – working with natural systems rather than against them.

Flood mitigation performance: The Reserve now functions as a detention basin storing approximately 12 million litres of stormwater before controlled release downstream. It played a critical role in reducing flood impacts within the town centre during the 2023 Auckland storm events, shortly after project completion.

Limits flood duration and recovery impacts: the integrated drainage system accommodates high volumes of water during storm events, but drains quickly once rainfall subsides. This minimises downtime for sport and recreation. As the reserve is designed for the flooding, there is limited or no cost to remediate the field after the flooding event.

Climate resilience: With increasing frequency and intensity of short-duration storm events, integrated and adaptive stormwater systems are essential to improving urban resilience.

Multi-benefit outcomes: The project delivers broad co-benefits, including ecological enhancement, flood mitigation, cultural value, and improved recreational provision.

Enhanced sports field performance: The upgraded field platform significantly improves drainage and usability, increasing capacity on a previously underutilised asset within an area experiencing sports field provision shortfalls.

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