Background:

The project is located between a school and two playgrounds in the heart of White City district. The pervious road and parking formed a flood hazard for children crossing the road and made school drop-off and pick-up difficult. So, methods were needed to create solutions that would avoid such difficulties.

It lies within the Counters Creek sewer catchment, which is well documented to be exceeding its capacity resulting in flooding of properties downstream. In addition, hydrological modelling of the Hammersmith & Fulham borough demonstrates that this stretch of Australia Road is susceptible to significant surface water flood risk.

The case study creates an urban public park using traffic restrictions, new surfacing, new elements of green infrastructure and street furniture that forms a valuable community resource whilst helping to reduce the area’s contribution to flooding.

Objectives:

- The objective is to create a space where landscape serves a vital drainage function providing flood resilience against known surface water and sewer flooding issues in the area and provides local climate change adaptation benefits.
- Transform the road into a shared space for pedestrians and cyclists to create an “urban oasis” that makes a bold visual statement and instils a sense of pride within the local community.
• Provide a multifunctional space to be used for a variety of events.
• Provide significant educational potential whilst being safe for the numerous children who use the site on a daily basis.

**Timeline**

Year of implementation: 2013

**Project Partners**

- London Borough of Hammersmith & Fulham
- Transport for London (Funder)
- Greater London Authority (Funder)
- Robert Bray Associates (Landscape architect / SuDS designer)
- McCloy Consulting (Engineer / SuDS Designer)
- F M Conway (Contractor)

**Strategies and Interventions**

- SUDS components used—permeable paving, planted basins, rain gardens, tree planting and downpipe
- Total site area—2,700m²
- Length of carriageway—121m
- Permeable paving—1,320m²
- Planted basins—335m²
- Raingardens—120m²
- Number of trees—49

**Results/observations**

- Reduction in local and wider flood risk.
- Annual flow volumes into the combined sewer overflow have been reduced by 50 per cent.

*Permeable paving directs Planted basin, incorporating water to heavily planted ‘wiggly wall basins and Structural Downpipes.*

*Source: [https://www.susdrain.org/case-studies/case_studies/bridget_joyce_square_london.html](https://www.susdrain.org/case-studies/case_studies/bridget_joyce_square_london.html)*
Outcomes of the Project:
Bridget Joyce Square was opened in November 2015 and was recognised as the Engineering Project with ‘best Community Impact’ at the Institution of Civil Engineers (ICE) London Civil Engineering Awards 2016. Following the success of this pilot project, it has led to further SUDS schemes being implemented by FM Conway on Melina Road and Mendora Road.

The new drainage system will help to minimise the risk of flooding in the area, while the regenerated square now provides an attractive outdoor space for the local community.

Funding and costs
Approximately £900,000.

Before and After

Figure: Pictures showing the cemented area before construction (Image 1) and connective and safe pedestrian environment post construction (Image 2).

Source: https://www.susdrain.org/case-studies/case_studies/bridget_joyce_square_london.html

Lessons learned
- Supervision of SuDS construction by experienced designers is essential.
- Involvement of the construction contractors early in the design process ensures best material choices and construction methodologies.
- Community engagement is essential to the successful embrace and understanding the benefits of the scheme.
- Urban regeneration can provide multi-functional benefits including drainage function.
- Landscape design which makes a bold visual statement can elevate the scheme and instils a sense of pride within the local community - the importance of the end user should not be underestimated.

Additional Information
Sources and References
https://www.fmconway.co.uk/case-studies/bridget-joyce-square