

## GO CYCLE KINGSTON: PORTSMOUTH ROAD SCHEME KINGSTON-UPON-THAMES, LONDON, ENGLAND

CLIENT: THE ROYAL BOROUGH OF KINGSTON / DESIGNER: ATKINS / CONTRACTOR: KIER

### BIG Biodiversity Challenge Award Category: Small scale

#### Project overview

A new cycle track along Portsmouth Road presented the opportunity for Biodiversity enhancements at two new access points along the riverfront. The planting was tolerant to climate change, using drought-tolerant plant species, rain gardens and a bee pollinator strategy, with flowering perennials offering food sources throughout the year.

#### What were the biodiversity conditions on site, prior to the enhancement?

Located alongside the River Thames, in accordance with The London Plan, Atkins sought to enhance and improve the outdated public realm, increasing public access to the riverside and addressing the opportunities for environmental improvements.

The site largely consisted of dense, bushy shrubs and self-seeded trees. Atkins sought to retain trees of particular value and to ensure that mitigation measures were meaningful and added to the biodiversity of the site. The existing bat and green corridor were retained and enhanced where possible.



*View of public realm enhancements – opening up access to the riverside and softening the river's edge with vibrant planting.*



*Valuable mature trees were retained whilst their setting was enhanced.*

### What were the reasons behind this project?

For improved pedestrian and cyclist access into Kingston and onto the riverfront. Atkins sought to enhance the biodiversity by providing alternative and enhanced planting typologies, as a means of addressing issues that the existing site did not do well. This included the introduction of ornamental grasses and flowering perennials for the benefit of insects and bees.

A biodiverse planting scheme was an integral component in improving the public realm, in addition to the planting, the scheme also included a series of terraces, SUDS, memorial benches, access ramps, steps, play equipment and paving.

### What were the biodiversity measures taken?

Thinking outside of the box, Atkins looked to permaculture for inspiration, to create a series of varying planting matrices across the site, each responding to specific site characteristics. The aim was to create a perennial polyculture that would be largely self-sustaining and thus supporting the permaculture notion that plants can work together to form strong communities, with minimal human intervention, leading to healthier planting communities and soils. This approach is readily adaptable to use on alternative sites.



*Two way segregated cycle track beside new planting and recessed café area overlooking the River Thames.*



*Rain gardens capture rain water run-off before it reaches the River Thames.*



### What were the biodiversity measures taken (Continued)?

The planting design included rain garden mixes and mixes suited to shade and open situations. Rain garden mixes were devised to incorporate plants that could tolerate drought and wet conditions respectively, whilst dually assisting in the treatment of runoff from the roads and in slowing the rate of run-off before it reaches the riverside.

The planting matrices consist of a succession of layers of vegetation, comprising of perennials, bulbs, annuals, grasses and sedges. Over a small site, a total of 88 different planting species were included, boosting the existing situation and varying the habitat along the riverside, whilst retaining and enhancing the existing green corridor. In direct response to the London Biodiversity Action Plan, Atkins decided that the planting scheme should focus on creating new areas of habitat, focussing primarily on grasses and flowering perennials. Plants were specifically chosen for their long-flowering seasons and so as to provide year-round cover and interest. The dense nature of the planting matrices means that there is less ground cover for weeds, leading to a low-maintenance, long-term planting solution.

Repetition has been a strong theme throughout the planting scheme, providing a linear habitat for birds and insects.



*Planting matrices provide dense ground cover and a plethora of flowering perennials and grasses.*



*A wide variety of flowering species providing pollination opportunities.*

## Further information

Kingston riverside was a great opportunity for the Royal Borough of Kingston, Atkins and ID Verde the planting contractor to provide a meaningful and diverse planting design to enhance a contemporary public realm scheme. Our aim was to provide a visually attractive and diverse site that would be multi-functional and sustainable, using research and innovation in planting techniques as a basis for devising the scheme. One year on and the design is thriving and really starting to come to life. The client and members of the public have remarked on how they have enjoyed walking through the site on their way to work and have appreciated the landscape as it changes throughout the year.

Creating valuable landscapes for people as well as birds, insects and mammals, this holistic notion of biodiversity was at the heart of our design ethos and Kingston has successfully encapsulated this vision. In order to focus on capturing tangible net biodiversity gains, for future projects, we would focus on considering implementing biodiversity monitoring from the offset, so as to devise a meaningful and ongoing method for capturing net biodiversity improvements.

Kingston is testament to meeting the client's requirements for a low maintenance public realm design, without losing the quality and excitement that you would associate with a higher maintenance, traditional, ornamental scheme, demonstrating that planting matrices and perennial-based plantings can provide holistic benefits and that Atkin's innovative approach in applying modern horticultural planting design techniques is directly applicable and appropriate to a public realm situation.



*Alliums and other flowering perennials provide an alternative ground cover under existing mature trees.*



*People enjoy stopping to take in the setting along the riverside – with a backdrop of naturalistic planting and the buzz of insects.*



## Project Team

- Client: Royal Borough Of Kingston Upon Thames / Transport for London
- Contractor: Kier and ID Verde for the planting
- Consultants: Atkins

## What was the motivation for carrying out the enhancement?

Tasked with designing a low-maintenance public realm scheme, Atkins moved away from the usual archaic model of low-maintenance public realm planting, focussed on shrubs and mono-cultures, in favour of innovation and a desire to enhance the public realm visually and ecologically, with a planting palette that incorporated 88 different planting species of flowering perennials and grasses over an area of 1,400m<sup>2</sup>.

Atkins worked collaboratively with RBK, Kier and ID Verde to deliver a holistic and biodiverse scheme. Through much research, thought and care, 26,000 new plants were incorporated into the public realm. The team went above and beyond to challenge the status quo and produce a contemporary planting scheme, setting a precedent for future public planting designs.



*The Kingston Go Cycle scheme was opened up to the public in the summer of 2017, one year on and the planting is thriving. The project has really set a precedent for public realm planting and the potentials that can be achieved through careful design, innovation and research-based design for both biodiversity and the community.*