



Design & Engineering – **Case study**

Low Carbon Footway Trial, King Street, Westminister



Client: Westminster City Council / FM Conway
Sector: Local Authority

Challenge

In a response to a growing climate challenge, Westminster City Council wanted to examine if its public highways works could be carried out in a more carbon efficient manner both in terms of their design, construction and on site operations.

Solution

- In a first of its kind trial developed jointly with FM Conway Contractors, a section of footway to King Street would be reinstated as part of the council's programme of planned maintenance. So that like for like comparisons could be made, the trial would deviate as little as possible from the standard Westminster Council footway specification with results compared to other planned maintenance work being carried out at Marlborough Hill to understand what if any carbon benefits could be achieved
- Electric plant and equipment were used alongside on-site charging facilities to reduce the need for machinery to be transported off-site each evening for charging
- Staff, operatives and visitors were also required to visit the site by a sustainable mode of transport, and where possible, materials were delivered by an electric vehicle or cargo bike
- The optimisation of the material and construction specifications beneath the paving surface involved the use of Marshalls Pavebed, Pavebond, and Pavejoint. This led to a reduction in bed depth and a decrease in embodied carbon, all while maintaining longevity and performance

"We hope that the success of this trial will see public realm works across the city transform for the better and help us towards maintaining a greener and cleaner Westminster."

Councillor Andrew Smith, Westminster City Council Cabinet Member for Highways & the Environment.

Carbon saving



79% saving in operational delivery against a typical Westminster Council project (0.0005 tonnes per day)

46% saving per m² of materials used in footway construction by reducing paving depth, foundation build up and material specification

4kg/m² saving by reducing paving slab thickness

76% saving on travel (0.01 tonnes per day)

60% saving per m² in deliveries (0.03 tonnes per day)

