

The New Pooley Bridge – Reconnecting a Community

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Abstract

The new stainless steel arch bridge for Pooley Bridge replaces a 250-year-old historic structure in a UNESCO World Heritage Site lost to flooding in 2015. The designers balanced key project constraints and community desires through the design process including an extensive public stakeholder engagement process. Resilience, durability, transparency in the landscape and speed of construction were all raised as critical, and the resulting design balances these aspects with an efficient and novel design that achieves a good balance of carbon cost to value.

Keywords: Resilience; stainless steel; arch; replacement bridge; community engagement; design for climate change.

1 Introduction

The village of Pooley Bridge is the north-eastern gate into the Lake District National Park, a UNESCO World Heritage Site with a uniquely beautiful landscape in north-west England. The village provided a crossing over the River Eamont for more than 250 years through a Grade-II listed 3-span stone arch bridge, built in 1764, which served as a critical link in the daily life of the area. The historic Pooley Bridge was not only important as a functional structure but was also a source of identity and pride for the community of Pooley Bridge – which owes its name to the river crossing.

In December 2015, Storm Desmond brought a 1 in 435-year flood, causing significant damage to the area and leading to scour beneath the river piers and to the ultimate collapse of the entire structure. This was a devastating loss to the community and their sense of identity. The shock after its abrupt removal was partially relieved by the installation of a temporary bridge three months later to avoid a 16km detour. However, it did not address the

extraordinary context, and its ongoing presence was also a daily reminder of loss and vulnerability.



Figure 1. The Historic Pooley Bridge before it was washed away during the flooding in 2015

2 Design Process

2.1 The challenge

Following a tender, bridge specialists Knight Architects, in collaboration with Mott MacDonald, were appointed by Cumbria County Council (CCC) in mid-2017 for the concept design of a new bridge