

Bearing replacement

Langley Footbridge, Langley Interchange, Slough

Client

Slough Borough Council

Designer

Freyssinet Limited

Principal Contractor

Freyssinet Limited

Works Commenced

April 2021

Works Completed

July 2021



Langley Footbridge crosses the M4 junction 5 interchange in Slough and provides a vital link for cyclists and pedestrians, connecting Langley and Colnbrook.

Regular monitoring inspections by the Slough Borough Council had indicated the bridge's bearings had reached their designed life span and were showing signs of deterioration.

Freyssinet acted as both Principal Designer and Principal Contractor on the project, which included:

- Conceptual design through to detailed design of the temporary works, including Approval in Principal and CAT II check of the temporary works.
- Management of pre-construction surveys, traffic management, lifting operations, site management including welfare and working at height access.
- Bearing design, manufacture and installation

Freyssinet was instructed to replace 20 elastomeric bearings (12 of the south footbridge and 8 of the north footbridge) and carry out refurbishment of the bridge parapets, re-painting the metal railings and timber handrails to improve aesthetics and extend the life of the assets.

The works process included:

- Design work (both permanent and temporary works)
- Pre-construction surveys
- Site establishment
- Erection of temporary works
- Jacking of the bridges utilising three separate jacking arrangements
- Replacement of bearings
- De-jacking of the bridges
- Site demobilisation

Incorporating the Client's requirements and the needs of the local community, Freyssinet developed a temporary works design which allowed the motorway interchange to remain open throughout the duration of the works by supporting the half-joints from above using a cantilever arrangement rather than from below (which would have required lane closures).

The works took place adjacent to two other complex schemes requiring traffic management (BBV M4 Smart Motorway scheme and Slough Borough Council road improvement scheme), so the Freyssinet team collaborated with the contractors involved to ensure there were no clashes and mitigated the impact on road users.

The project was completed on time and on budget. The Client praised the professionalism and dedication Freyssinet demonstrated and was extremely satisfied with the end results.