



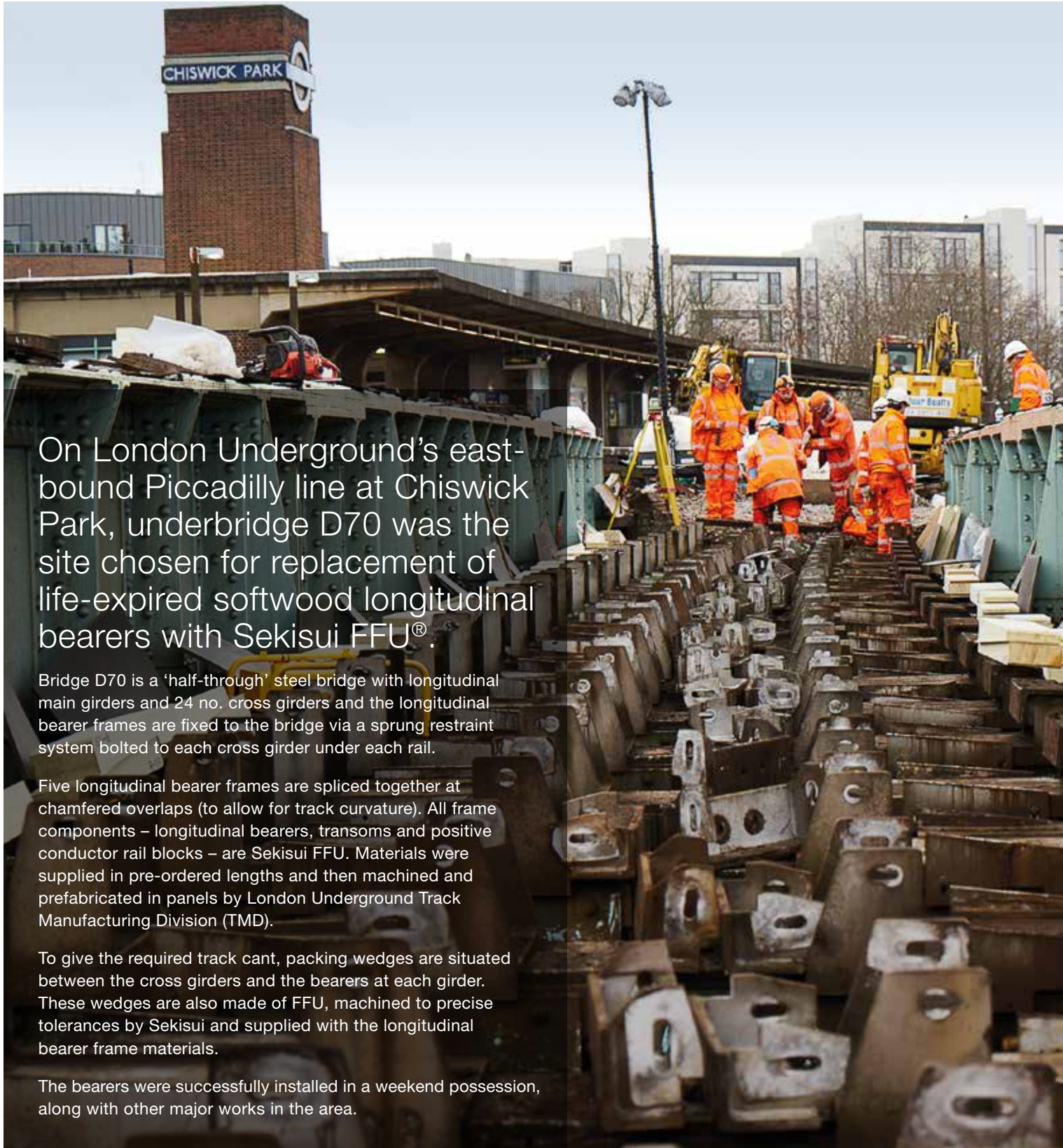
FFU[®] Synthetic Timber as Longitudinal Bearers

London | Chiswick Park

RAILWAY TECHNOLOGY

State
of the Art





On London Underground's east-bound Piccadilly line at Chiswick Park, underbridge D70 was the site chosen for replacement of life-expired softwood longitudinal bearers with Sekisui FFU®.

Bridge D70 is a 'half-through' steel bridge with longitudinal main girders and 24 no. cross girders and the longitudinal bearer frames are fixed to the bridge via a sprung restraint system bolted to each cross girder under each rail.

Five longitudinal bearer frames are spliced together at chamfered overlaps (to allow for track curvature). All frame components – longitudinal bearers, transoms and positive conductor rail blocks – are Sekisui FFU. Materials were supplied in pre-ordered lengths and then machined and prefabricated in panels by London Underground Track Manufacturing Division (TMD).

To give the required track cant, packing wedges are situated between the cross girders and the bearers at each girder. These wedges are also made of FFU, machined to precise tolerances by Sekisui and supplied with the longitudinal bearer frame materials.

The bearers were successfully installed in a weekend possession, along with other major works in the area.



Underbridge D70.



The prefabricated longitudinal bearer frames, manufactured from Sekisui FFU.

Life-expired longitudinal bearers and packings removed from the retention system. Sekisui FFU wedge packings ready for installation.



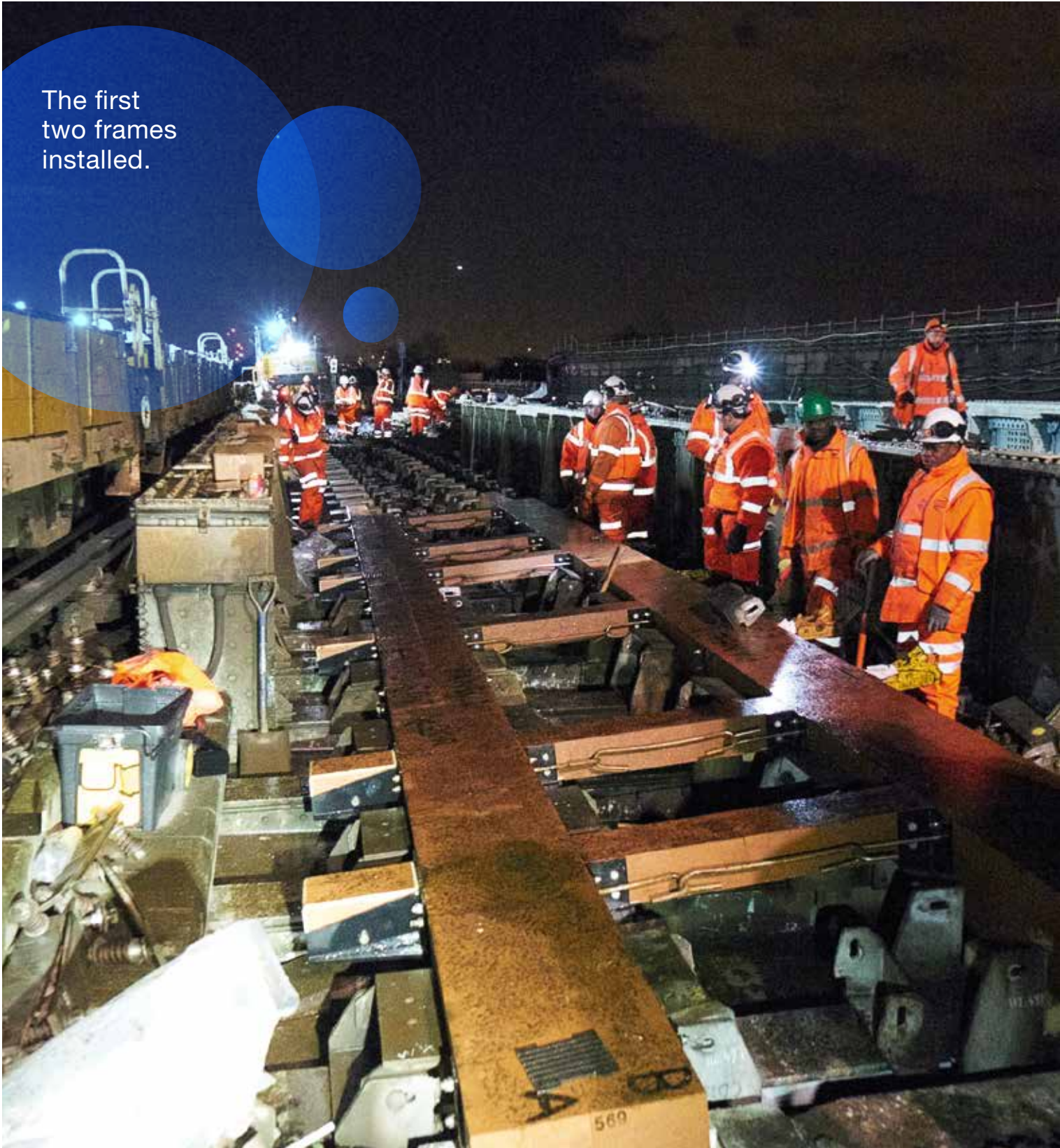
Sekisui FFU wedge packings installed to provide the required track cant when the longitudinal bearer frames are installed.





The splices at the end of longitudinal bearer panel #1 can be seen here.

The first two frames installed.









With the longitudinal bearer frames in place, all fixings are secured and rails and baseplates are installed.



Completed
installation awaiting
Walkway boards.



Longitudinal bearers, transoms and positive conductor rail blocks are all manufactured from Sekisui FFU. Here, baseplates are being secured.



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