

CASE STUDY



GEOFEM

Pacific Highway, NSW



During construction of a new river bridge for the Pacific Highway in New South Wales, a dispute arose over displacements noticed in an existing adjacent bridge. One key advantage of satellite data is the ability to obtain information retrospectively. Combined with engineering expertise it becomes a powerful forensic tool.



InSAR bridge displacement data

THE CHALLENGE

- No displacement data for the existing bridge prior to or during construction of the new bridge was recorded, making it virtually impossible to establish the cause of the displacements.

THE SOLUTION

- InSAR displacement analysis of the existing bridge, abutments and river banks both during construction and for a two-year period prior to construction.
- Earthworks and other construction activities made obtaining coherent data particularly challenging, requiring a combination of analysis methods. Civil engineering expertise was needed to interpret the effect of construction activities on the displacement data and dismiss unreliable data.

THE BENEFITS

- Reliable, independently-determined displacement data – which was critical to the dispute – was available for the first time.
- A cause of the existing bridge displacements was established with a high degree of certainty.
- The dispute was settled in a more informed manner.



Satellite analysis with engineering insight