

## NUDGENE ROAD BRIDGE BEARINGS

### PROJECT SUMMARY

Client: Lendlease

Location: Nudgee Road, Nudgee

Duration: 1 week

Value: \$ 30,000

#### Major Challenges Overcome:

- Lifting height restrictions
- Damage to the bearings as procurement lead time was outside project parameters
- Grouted HD bolts



### Nudgee Bridge

#### Scope

1. Develop a construction methodology statement that satisfies the requirements of DTMR.
2. Ensure the jacking is safe to carry out and that the girders were sufficiently restrained
3. Lift each girder sufficiently to remove the bearings that require taper plate grouting
4. Remove the bearing
5. Remove the taper plate
6. Clean the pedestals and replace the bearing with the grouted taper plate

#### Work Done

Jacking gussets were not required as the bridge headstock had jacking platforms. The jacks were setup at each girder on the platforms.

#### The Project

A multi span bridge has been constructed at Nudgee Road crossing the Gateway. The deep girders have been placed on rubber bearings with a taper plate above the bearing. At five (5) of these bearings, a gap up to 2mm has been identified between the plate and girder. This gap is to be closed in a way that satisfies the Department of Transport and Main Roads (DTMR).

The project had to be done in a short timeframe as bridge construction could not continue until the taper plates were grouted. Challenges faced was to remove the epoxied bearing without damage and remove the holding down bolts which had been grouted in with epoxy.



A 20mm support plate was placed on top of the jack to evenly distribute the load and these were grouted with fast curing Chemrite CR-FC grout.

Epoxy Solutions then fitted sensitive measuring equipment to each girder so any movement can easily be closely monitored. This was important to avoid damage to the structure as the adjacent bearings were epoxy grouted.



Each girder was then lifted to a point where each bearing could be removed. This was done using basic hand tools and much care was taken not to damage the elastomeric bearings.

Once the bearings were removed, the bolts securing the taper plate had to be cleaned. They

were grouted as part of the original grouting process. The epoxy was removed using a combination of heat and small hand tools.



Once the taper plates were removed, they were cleaned and replaced with epoxy grout and new HD bolts.

Once the taper plates were bolted in place, the bearings were replaced and grouted. The load was then transferred back to the bearings and a thorough check on grout and positioning was done.