

Project Brief

## Stamford Residences Floor Strengthening



Auckland, NZ  
2008



This 11 storey apartment addition to an existing and operational 10 storey hotel necessitated strengthening the existing shear walls by core drilling up to 14m into the 400mm thick concrete and grouting in additional reinforcing. Due to an innovative analysis and design approach, the extension in lightweight steel frame construction only required minimal structural strengthening of the existing building. Three tuned mass dampers at roof level control movement due to the building's response to strong wind effects.

Tyfo® SEH 51 composite system was installed to strengthen the level 3 car-park floor. Neuchatel mastic asphalt (hot mix) on a felt layer was installed over the Fibrwrap strengthening. Significant testing was done on site with the applicator working in close conjunction with the engineer to prove the application of a Tyfo® S Resin and sand layer mitigated the heat of the hot mix and averted damage to the Fibrwrap.

The ACENZ INNOVATE NZ 2009: Award of Excellence recognises Aurecon's foresight in showing their client that it is not always necessary to demolish an already good building to increase the height, substantially.