

Project Role: Drainage Design and Flood Mitigation Advice

Construction Cost: \$1.88 Billion

Client: SMEC-Maunsell JV



Project Description:

The project entails the construction and upgrade of approximately 20 kilometres of the existing Gateway Motorway including the iconic Gateway Motorway Bridge. Yeats worked under a sub consultancy agreement with the Design Joint Venture, providing specialist advice on various drainage aspects on the project including, hydrologic (XP-Rafts and RORB) and hydraulic design (Hec-Ras) of approximately 50 cross drainage structures ranging from 0.60 metre diameter reinforced concrete pipes to multiple cell 3 metre by 3 metre box culverts, design of the longitudinal road drainage using DRAINS, design of the gateway bridge drainage including scupper design and detailed analysis and modelling of the abutment drainage structures, design of various open channels, design of water quality treatment devices including basins, wetlands and gross pollutant traps.

Yeats Consulting Involvement:

Yeats Consulting was involved in the project through a sub-consultancy agreement with the Design Team of SMEC and Maunsell joint venture. Yeats Consulting provided specialist advice on various drainage aspects of the project including:

- Design of the longitudinal road drainage using DRAINS;
- Design of approximately 50 cross drainage structure using Rational method, XP-Rafts, Drains, and Hec-Ras;
- Design of various open channels
- Design of water quality treatment devices including basins, wetlands, and gross pollutant traps; and
- Design of spill containment devices.

Co-ordination with the larger team including geotechnical, road alignment, structures (bridges, RSS Walls, abutments, and noise walls), ITS and environment.