



Bill Johnson

B.Eng (hons): Civil
MEngSC(Civ/Env)
MIEAustralia
CPEng
RPEQ
CPESC

Director and Senior Civil Engineer



SEEC

Strategic Environmental and Engineering Consulting

Bill is a civil engineer with experience in the water engineering and infrastructure fields. He has skills in water management, drainage, water resources, water quality and flood modelling. He has designed stormwater systems including traditional and Water Sensitive Urban Design elements, pipeline and pumping stations, sedimentation dams, and completed a number of water balance models to determine water yields and supply reliabilities. Bill has developed and reviewed both one and two dimensional flood models using HEC-RAS, XP-SWMM, DRAINS, and TUFLOW software. He has undertaken the hydraulic review of numerous Erosion and Sediment Control Plans and undertaken independent assessments of erosion and sediment control works and advised mitigation measures for poorly functioning erosion and sediment control measures, creek bank erosion and gully erosion.

Bill has developed management skills through the leadership of design teams for various major infrastructure projects. The water professionals achieved multiple project objectives through collaboration and liaison with client representatives and other project specialists. Bill provided guidance, technical direction, coaching and was directly involved preparing proposals, project management and technical supervision.

Bill is SEEC's Senior Civil Engineer and one of our Principal Experts in Surface Water Management, Flood Assessment & Management, Reticulated Water and Sewage and Erosion and Sediment Control.

Qualifications

- Master of Engineering Science (Civil Engineering — Environment), Queensland University of Technology
- Bachelor of Engineering (Honours) (Civil), Queensland University of Technology
- Certified Professional in Erosion and Sediment Control (CPESC #7508)
- Member of the International Erosion Control Association (IECA)
- Chartered Professional Engineer; National Professional Engineers Register; Registered Professional Engineer of Queensland (RPEQ No. 6728)

Professional Affiliations

- Engineers Australia: Member;
- Stormwater Queensland: Committee Member
- International Erosion Control Association: Member

Areas of Expertise

- Preparation of environmental studies, including Water Cycle Management Plans
- Preparation of Soil and Water Management Plans and Erosion and Sediment Control Plans
- Sewerage Design
- Reticulated Water Design
- MUSIC modelling
- Erosion mitigation and rehabilitation
- Sediment and pollutant control
- Preparation of Surface Water Assessments including surface water harvesting.
- Stormwater management

10-Year Career Highlights

Project Management

- **Toowoomba Second Range Crossing (2017)**, Toowoomba, Qld, Australia, Nexus. Discipline leader — drainage team.
- **Southern Corridor Interchange (2015)**, Auckland, New Zealand, Fulton Hogan. Led drainage team during the tender design.
- **DTMR Metro Drainage Investigation (2013)**, Brisbane, Qld, Australia, Department of Transport and Main Roads. Project Manager and Technical lead.
- **Ipswich Motorway Upgrade (2010)**, Ipswich, Qld, Australia, Department of Main Roads. Discipline leader — drainage team.
- **Airport Link (2007)**, Brisbane, Qld, Australia, Thiess – John Holland Joint Venture. Drainage and flooding coordinator.

Water, surface water and hydraulics

- **LGIP Technical Lead City of Gold Coast Council (2020)**. Undertaking the technical lead role for the preparation of the City of Gold Coast stormwater quantity and quality trunk infrastructure networks.
- **Integrated Water Cycle Management Plan Moss Vale Road North Urban Release Area (2020)** Shoalhaven City Council. Development of an Integrated Water Cycle Management Assessment (IWCMA) for the Moss Vale Road North Urban Release Area (URA). The assessment included MUSIC modelling of water quality treatment measures such as bio-retention basins and wetlands and DRAINS modelling to identify required on-site detention.
- **Coffs Harbour Bypass Project (2020)**. Roads and Maritime Services. Undertook the assessment of impacts of construction phase sediment basins on water quality during the construction of the 14km road project.
- **Soil, Water and Flooding Assessment Visy Dry Recycling Facility Alexandria (2019)**. Review of potential soil erosion, stormwater impacts and requirements of flood protection for the proposed dry recycling facility.
- **Vital Chemical Site Based Stormwater Management Plan (2019)**. Development of a Site Based Stormwater Management Plan to assess the adequacy of the existing stormwater and roofwater drainage system in accordance with the Queensland Urban Drainage Manual.
- **Heathcote Road Discharge Impact Assessment (2019)** Roads and Maritime Services. Undertook the review of expected sediment sump discharges on water quality of Williams Creek and Harris Creek prior to discharging into the Georges River during the construction of a 2.2km section of the road.
- **Nelligen Bridge Water Quality Assessment (2018)** Cardno. Undertook the review of expected sediment basin discharges on water quality of the Clyde River during the construction on the bridge. A separate assessment was also made on the operational phase water quality impacts.

Water, surface water and hydraulics (cont.)

- **Batemans Bay Bridge Water Quality Assessment (2017)** Aurecon. Undertook the review of expected sediment basin discharges on water quality of the Clyde River during the construction on the bridge. A separate assessment was also made on the operational phase water quality impacts.
- **Moreton Bay Regional Council PSP Integrated Design Stormwater Management (2014)** Moreton Bay Regional Council. The project included the review and refinement of a DRAFT strategy prepared by Council staff.
- **Toowoomba Regional Council Stormwater Management Strategy (2014)** Toowoomba Regional Council. The project included the development of a strategy to address current legislative requirements and guide the planning and integrated design of stormwater systems within the Toowoomba Regional Council to achieve desired sustainable outcomes that minimise the impact of urban stormwater.
- **Leppington Total Water Cycle Management plan – (commenced August 2012)**, NSW Department of Planning and Infrastructure. Recently commissioned to develop a water cycle management strategy based on Water Sensitive Urban design principles for the Leppington precinct of the South West Growth Centre.
- **Bunbury Port Access Road – Owners Engineer Independent Review, (2012)**, Main Roads, Western Australia. Undertook a review of the detailed design of the Bunbury Port Access Road drainage system and waterway structures on behalf of Main Roads.
- **City West Water - City of Maribyrnong Stormwater Harvesting Project, (2012)**, Provided high level advice, detailed design and review of four stormwater harvesting projects for City West Water and Maribyrnong City Council.
- **Open channel report for Snowdrop Avenue (2011)**, Aroona, Qld, Australia, Sunshine Coast Regional Council. Project manager. Managed and reviewed the analysis of an existing open channel.
- **Waterproofing the South Stage 2 – Stormwater Harvesting (2011)**, City of Onkaparinga. Project Review. Provided high level advice and detailed design review of stormwater harvesting wetland designs.
- **Brisbane City Council Total Water Cycle Management – Independent certifier (2012)**, Brisbane City Council. Independent Certifier.
- **Aldoga Rail Yard Concept Design, Aurizon, (2013)**. Undertook the supervision and review of a flooding study of Larcom Creek and its tributaries to determine an appropriate elevation to provide the Aldoga Rail Yard, road and rail bridges and culvert structures with adequate flood immunity.

Water, surface water and hydraulics (cont.)

- **Shepton Quarry Sediment Basin (2018)** BMT WBM. Detailed design and development of construction drawings of a sediment basin for an existing quarry to meet regulator compliance requirements.
- **Nowra Bridge Water Quality Assessment (2018)** Roads and Maritime Services. Undertook the review of expected sediment basin discharges on water quality of the Shoalhaven River during the construction on the bridge and associated roadworks. A separate assessment was also made on the operational phase water quality impacts.
- **Integrated Water Cycle Management Plan Moss Vale Road South Urban Release Area (2017)** Shoalhaven City Council. Development of an Integrated Water Cycle Management Assessment (IWCMA) for the Moss Vale Road South Urban Release Area (URA). The assessment informed the preparation of a site-specific Development Control Plan (DCP) to guide residential development in the URA in accordance with Part 6 of Shoalhaven Local Environmental Plan (SLEP) 2014.
- **Aldoga Rail Yard – Environmental Planning Study, Aurizon, (2013)**. The project involved a review of surface water aspects of the project area and downstream receiving environments.
- **Yarrabilba Total Water Cycle Management Strategy Review (2012)**, Urban Land Development Authority (ULDA). Commissioned to review the Yarrabilba Total Water Cycle Management (TWCM) Strategy on behalf of the ULDA.
- **Smiths Street drainage design (2014)** Gold Coast, Qld, Australia, Department of Transport and Main Roads. Drainage Technical lead.
- **Roads and Drainage Standards Review (2012)** Toowoomba Regional Council. The project reviewed Councils current engineering and drainage design standards and benchmarked them against other South East Queensland councils.
- **Blacktown International Sportspark – Stormwater harvesting (2012)**, Blacktown City Council. Option assessment. Provided high level option identification and analysis of various stormwater harvesting options for the Blacktown International Sportspark.
- **Blackbutt Range restoration Works (2011-2012)**, Department of Transport and Main Roads, Queensland.
- **Frankston City Council Water Sensitive Urban Design Guidelines (2011)**, Frankston, Melbourne, Australia. Undertook the review role for the preparation of the Frankston City Council WSUD Guidelines.

Erosion and Sediment Control

- **Mt Lindsay Highway Upgrade Erosion and Sediment Control Plan (2020)**. Erosion and sediment control plan for the upgrade of the Mt Lindsay Highway between Camp Cable Road and Tamborine Street including a major culvert crossing of Jimboomba Creek.
- **Simpson Playground Boat Ramp, Erosion and Sediment Control Plan (2020)**. Crosana. Development of an ESCP for the removal of silt around the boat ramp and pontoon.
- **Newell Highway Upgrade (Mungle Back Creek to Boggabilla) (2019)**. Fulton Hogan. Site inspection and audit report of on site erosion and sediment controls.
- **Brisbane Valley Bikeway Erosion and Sediment Control Plan (2019)**. Ipswich City Council. Development of an erosion and sediment control plan for a 2km long bike path.
- **Three Chain Road Erosion and Sediment Control Plans (2019)**. Bundaberg Regional Council. Development of erosion and sediment control plans for the upgrade of the existing road including design of sediment sumps, and temporary culvert diversion.
- **Bob Bell Park River bank Rehabilitation (2019)** Moreton Bay Regional Council. Undertake the detailed design of bank rehabilitation works for a section of the South Pine River. Included review of erosion mechanisms, available flood modelling, soil sampling, co-ordination of survey and landscaper to develop a “soft engineering”. Approvals, specifications and a Bill of Quantities was included as part of the detailed design.
- **M1-M3 Upgrade Erosion and Sediment Control Plans (2019)**, Lend Lease. Undertake plans and RPEQ sign off all hydraulic aspects of the plans. This includes channels, sediment basins, emergency spillways, rock filter dams, etc.
- **Hub 05 Channel Erosion (2019)**, Santos. Review of an eroded channel and mitigation design including realignment and soil amelioration.
- **Crossacres Street Erosion and Sediment Control Plans (2018)** Penfold Property Group. Undertake and certify an erosion and Sediment control plan for a 24 lot subdivision at Doolandella.
- **Site Audits for Ipswich City Council (2018)** Ipswich City Council. Erosion and Sediment Control audits and reporting of various sites within Ipswich City.
- **Warrego Highway, Miles (2018)** FKG Group. Development and certification of an Erosion and Sediment Control Plan.
- **King 2 East Extension Project (2018)** Xenith Consulting. Preparation of a report describing the current practices of vegetation clearing and topsoil stripping, existing soil properties and a selection of feasible erosion and sediment control measures.
- **Sandra Nolan Park, Redbank (2018)** Ipswich City Council. ESCP preparation for construction of downstream channel improvements along a modified waterway.

Flood studies

- **Bolong Way, Coolangatta Flood Study (2018)** Shoalhaven City Council. Development of a DRAINS model and a TUFLOW model to review the potential impact from the installation of a new diversion channel that may alter the natural hydrology of existing property. The DRAINS model included AR&R 2016 rainfall and temporal patterns.
- **Flood Study for 45 Hoskins Street (2017)** Property Owner. Development of a DRAINS model and a TUFLOW model to review the potential impact from major earthworks on the property and the determine an appropriate floor level. The DRAINS model included AR&R 2016 rainfall and temporal patterns.
- **Regency Downs Flood Risk Management Study (2014)**, Plainlands, Qld, Lockyer Valley Regional Council. Acting as the project manager on behalf of Council to facilitate flood modelling and a flood risk assessment for a number of sub-catchments at Regency Downs. I also undertook the review of supplied reports and flood maps to confirm they met the brief requirements and confirmed Council had been supplied with fully working models.
- **Douglas McInnes Drive Culvert and Scour Assessment (2014)**, Laidley, Lockyer Valley Regional Council. The study included the hydrological and hydraulic modelling of the existing network in XP-SWMM and the feasibility of constructing a new pipeline from an existing manhole to an adjacent flowpath which outlets via existing culverts. The adjacent flowpath suffers from erosion with significant erosion downstream of the existing culvert.
- **Overview of Levees for the Provision of Regional Flood Mitigation (2011)**, Ipswich City Council. Project Manager. Managed and reviewed the project into the issues relevant to retrofitting levees in urban areas of Ipswich impacted by flooding from the January 2011 floods.
- **Flood modelling, bridge scour assessment and scour countermeasures design for Waikato Bridge, Ngaruawahia Bypass (2011-2012), New Zealand.** Principal designer for all drainage packages including the flood modelling of the Waikato Bridge that included detailed bridge scour assessment and countermeasures design for the 142m wide bridge with single span of 76.6m between 2 V-shaped piers.
- **Mains Road and Kessels Road Project (2011-2012)**, Queensland. Baulderstone / Parsons Brinckerhoff. Principal Engineer. Responsible for the quality of the drainage, water quality and flood modelling for the project.

Erosion and Sediment Control (cont.)

- **Warrego Highway, Dalby (2017)** FKG Group. Development and certification of an Erosion and Sediment Control Plan.
- **Gateway Upgrade North Erosion and Sediment Control Plans (2017)**, Lend Lease. Undertake and RPEQ sign off all hydraulic aspects of the plans. This includes channels, sediment basins, emergency spillways, rock filter dams, etc.
- **Daandine Expansion Project Erosion and Sediment Control Plan, (2015)**, Undertook the hydraulic design of two rock energy dissipaters as part of an Erosion and Sediment Control Plan for the Project.
- **Node 4 Rehabilitation Plan, (2015)**, Moranbah ,Arrow Energy. Strategic Environmental and Engineering Consulting. Undertook the design of the rock lined drainage channel, to prevent excess water running over the pipeline as part of an ESCP and reviewed the rehabilitation drawings from a civil/hydraulic perspective.
- **Warrigal Road Erosion and Sediment Control Plan (2014)**, Brisbane City Council, Qld, Australia. Supervised and reviewed the Erosion and Sediment Control plan for the Warrigal Road extension.
- **Nebo Construction Village Erosion and Sediment Control Plan (2013)**, Pacific National. Supervised and reviewed a conceptual Erosion and Sediment Control Plan (ESCP) for the Nebo Accommodation Village.
- **Sedimentation basin design review – Te Mhi Geothermal Power Project (2011)**, Taupo, New Zealand. Design review of two sedimentation ponds collecting runoff from proposed mining activities.
- **Preliminary Erosion and Sediment Control Plan – Hunter River Water Intake, Rio Tinto (2011)** - Managed and reviewed a preliminary Erosion and Sediment Control Plan for the proposed Hunter River intake and pump station at Muswellbrook, NSW.
- **Sedimentation basin design – Kogan Creek Power Station (2011)**, Qld, Australia, CS Energy. Undertook the sizing of two sedimentation basins for a temporarily disturbed catchment
- **Erosion and Sediment Control Plan – Allens Asphalt Manufacturing Facility (2011), Caloundra, Qld, Australia.** Allens Asphalt. Undertook the preparation of an erosion and sediment control plan as part of a development application for an Operational Works Development Application.

Contact Details

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