



John F McCrann

SENIOR FLOOD ENGINEER

John has in excess of 14 years consulting plus several years of on-site experience and has accumulated an extensive and unique skill set as a water and civil engineer, including hydraulic and hydrological investigations, civil design, project management and contract administration.

He has been involved in a number of large and small projects of varying complexity, ranging from feasibility studies, preliminary design, detail design and documentation, procurement and superintendence for public and private organisations.

Areas of Expertise

- Civil engineering design and documentation
- Civil engineering project coordination and contract administration
- Hydraulic and hydrological analysis and modelling

Recent Project Experience

Australian Education City, East Werribee, Victoria:

Technical lead for stormwater management for the proposed multi-billion project, tasks included optimising potential site development by balancing commercial space, public amenity and stormwater management. This project involved significant hydrologic and hydraulic modelling of various options to confirm that the proposed masterplan achieved acceptable outcomes for all stakeholders.

Advice was provided to the multidiscipline team in relation to master planning, construction staging, approvals, risk identification and management. All output feed into the project business case to confirm project viability.

Melbourne Metropolitan Rail Project, Victoria:

Input into the preparation of the initial (IRD) and detailed reference designs (DRD) including review of developed 1D and 2D hydraulic model of the existing urban drainage system in the Moonee Ponds Creek and Maribyrnong River catchments. Additional tasks included liaison with statutory authorities and stakeholders, preparation of reporting, provision of advice to Client, attendance of internal and external workshops, review of design standards. Support provided to junior staff and multiple design disciplines. John is also expert witness for the surface water discipline of the project.

Huntingdale Wetland Detailed Design, Victoria:

John is the Project Manager for the Huntingdale Wetland rectification detailed design which involves the development of a functional and detailed design to improve the operation of the existing regulating structures throughout the wetland and retarding basin. In addition to technical input the role also required the management and coordination of sub-contractors and external organisations.

Engineering Services and Project Management Contract, Victoria:

Primary representative to Mildura Rural City Council (MRCC) with permanent resourcing at the MRCC Chambers. Primary function of the role is to interface between the Client and the service provider, ensuring effective coordination, delivery of design packages and on-site

EDUCATION/QUALIFICATIONS

Bachelor of Engineering (Civil)
La Trobe University, 2000

Master of Engineering (Civil)
University of Queensland, 2014

CERTIFICATIONS

PRINCE2 (Foundation)

MEMBERSHIPS AND AFFILIATIONS

Member of Institute of Engineers
Australia (MIEAust)

Member of American Society of Civil
Engineers (AM ASCE)

Member of Hydrological Society of
South Australia (HydSoc)

LANGUAGES

English: Fluent

OTHER

- Experience:
13+ years
- Joined Jacobs:
June 2015
- Office location:
Melbourne, Australia
- Nationality:
Australian / Irish

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construction activities.

Review and acceptance of project briefs, packaging of agreed briefs and distributing to designers, ensuring appropriate design development and delivery of projects in agreed time and budget, procurement of Contractors and materials plus superintendence / supervision of works.

During my tenure in excess of 175 municipal projects were completed including road construction and reconstruction, wetlands, drainage systems, playground and sporting facilities, paths, etc.

In addition to the above Contract a number of additional Clients were also serviced.

Burra – Nyah – Vinifera SDL Project, Victoria:

Project manager responsible for the finalisation of the advanced concept design for Sustainable Diversion Limits (SDL) works along the Murray River. This involves review of 1D and 2D model results, geotechnical investigations and civil design components in order to complete the final advanced concept design in support of our Clients application for funding.

Wiggins Island Rail Loop, Queensland:

(Discipline Lead) Undertake flood modelling of proposed development area and develop detailed drainage design of Stage 1 works and preliminary drainage design of Stage 2 works along rail corridor. Manage discipline resources, budgets, supervision and guidance of junior engineers, review and verification of calculations and documentation, including construction water supply strategy

Surat Basin Rail Project - Supplemental EIS, Queensland:

(Discipline Lead) Provision of additional supporting information for the Supplemental Environmental Impact Assessment, including assistance to multi-disciplinary team. Manage discipline resources, budgets, supervision and guidance of junior engineers, review and verification of calculations and documentation, including construction water supply strategy

Surat Basin Rail Project - Stage 3, Queensland:

(Discipline Lead) Undertake flood modelling along proposed rail corridor and develop mitigation strategy. Works also included development of construction water supply strategy along rail corridor. Manage discipline resources, budget, supervision and guidance of junior engineers, review and verification of calculations, models and documentation.

South Walker Creek Mine, Queensland:

(Discipline Lead) Review existing flood modelling along proposed rail corridor and develop mitigation strategies. Manage discipline resources, budget, supervision and guidance of junior engineers, review and verification of calculations, models and documentation.

North Coast Rail Line (Abbott Point), Queensland:

Evaluation of expansion of Abbott Point rail capacity requiring flood study and drainage design. Review and verification of hydrological and 1D & 2D hydraulic modelling and reporting. Guidance of junior staff.

Jilalan Rail Yard Expansion, Queensland:

Develop hydrological and hydraulic models of the study area, develop drainage design and provided supporting information to multi-disciplinary

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team and planners. Review and verification of 1D & 2D hydraulic modelling, reporting and design plus guidance of junior staff.

Chalco Aurukun Bauxite Mine, Queensland:

Site hydrology, flood study investigation, site drainage, fire water system design, fuel dump fire system design, assessment of dam location options, dam reliability, climate change impacts, operational water balance, statutory groundwater applications, potable and sewerage pipeline design and documentation. Review and verification of various calculations, reporting and guidance to junior engineers.

Murray and Tully Rivers, Queensland:

Hydrological and hydraulic modelling of the Bruce Highway and Rail crossings of the Murray and Tully Rivers, including impact and option assessments, road inundation and closure times. Review of developed hydrological and hydraulic models. Preparation of reporting and figures.

Viking Drive Commercial Development, Queensland:

Review of existing 1-dimensional flood study hydrology and hydraulic modelling. Develop 2-dimensional MIKE Flood model of proposed development and undertake impact assessment. Preparation of figures, reporting and input into development application.

Oxley Creek Flood Study, Queensland:

Update and extend existing Oxley Creek 1- & 2- dimensional flood models along Oxley and Blunder Creeks. Review and extend existing Oxley Creek model to include additional 1D lengths upstream of existing 2D model boundary, collation of data and results, preparation of Hydraulic Structure Reference Sheets (HSRS) finalise project reporting and figures.

Barron River Delta Flood Model, Queensland:

Ongoing project maintaining a current calibrated hydrological and hydraulic models of the Barron River Delta Floodplain incorporating all developments within the model domain. The model facilitates Emergency Response Planning, minimum floor levels, etc.

Update hydrological model to incorporate data from Cyclone Monica and calibrating the hydrological and hydraulic models based upon BoM and Cairns City Council high water survey data. Evaluate and model Probable Maximum Precipitation (PMP). Preparation of report and associated figures.

Lake Placid, Queensland:

Incorporate the proposed flood defence levee surrounding the suburbs of Caravonica, Lake Placid and Kamerunga into the existing Barron River Delta flood model. Incorporate proposed levee modifications and spillway into existing model and identify resulting afflux and spillway requirements and protection requirements.

Beachtown Access Roads, Queensland:

Assess options to increase flood immunity to the Holloways, Machins and Yorkys Knob beach roads. Involved review and updating current Barron River Delta 2D flood model by reviewing and including additional drainage structures across each road.

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Jericho Town Levee Investigation, Queensland:

Review and update existing MIKE21 2D hydraulic model. Model various events affecting the Jericho township and determine an acceptable levee alignment and level, providing immunity to the 50 year ARI event. Levee spillway assessment providing controlled over topping of levee during extreme events. Local drainage issues were also considered and reported.