

SPECIALIST FIELDS

Hydrologic Analysis
Hydraulic Analysis
Stormwater Modelling
Flood Management
Urban Drainage
River Engineering
GIS Analysis

EXPERIENCE

12 Years

EDUCATION

BEng (Civil) (Hons),
University of
Queensland 2006

PROFESSIONAL MEMBERSHIPS

RPEQ
MIEAust.
IEA QLD Water Panel

SOFTWARE PROFICIENCY

12D
AutoCAD
DELFT3D
HEC-RAS
MapInfo
MIKE Suite
MUSIC
QGIS
SOBEK
TUFLOW
URBS
WBNM
XPRAFTS
XPSWMM

CAREER OVERVIEW

Laurence is a civil engineer specialising in the fields of hydrology, hydraulics and water quality. He has developed particular expertise in detailed modelling of complex river and floodplain systems utilising a range of commercial software packages, applying innovative techniques and engineering judgement to provide realistic, efficient and accurate analysis.

SIGNIFICANT PROJECTS

Citiswich Development, Bundamba (2011 - 2017)

Local and regional flood impact assessment for both masterplan and staged works, using engineered channels and mitigation measures to maximise the development yield of the site. The overall strategy evolved over the course of several years in order to reflect ongoing changes legislation and guidelines following the January 2011 floods.

RNA Redevelopment, Brisbane, Queensland (2013 - 2017)

Detailed 1D/2D TUFLOW multi-domain modelling of a fully urbanised 92 hectare site to support a major mixed use development including developing a relief drainage scheme to provide flood immunity in a site significantly constrained by existing underground infrastructure.

The Heights, Pimpama, Gold Coast, Queensland (2014 - 2017)

Establishment of both masterplan and stage based flooding and stormwater management assessment using TUFLOW 1D/2D for 110 hectare mixed residential and commercial development in a steep sloped site and with consideration of environmental constraints.

Stafford Woolworths Site, Stafford, Brisbane (2014)

Establishment of a detailed 1D/2D SOBEK model assess the local overland flow and flood levels through the site adjacent to Kedron Brook, using engineered channels, culverts and drop structures to mitigate flood impacts associated with the proposed development.

Pelican Waters Estate, Caloundra (2013)

Detailed lake water quality and lake turnover assessment of the proposed Pelican Waters Southern Lake development.

Stratton Street Catchment, Brisbane City Council (2012)

Establishment of a dual catchment wide detailed hydrologic and 1D/2D TUFLOW hydraulic flood study encompassing both the Water Street and Stratton Street catchments for Brisbane City Council incorporating relief drainage analysis and ultimate development storage loss sensitivity.

Coomera River, Gold Coast (2012)

Establishment of a detailed 1D MIKE11 hydraulic model of the entire Coomera River catchment for Gold Coast City Council's Coomera River Flood Emergency Management Planning purposes.