



## DHI CASE STORY

## FORGING A TRUSTED ADVISORY ROLE WITH TAURANGA

DHI New Zealand is now a long-term trusted advisor for Tauranga City Council

We now act as a trusted advisor for Tauranga City Council (TCC), playing an important role to guide them towards better water modelling management. We were selected as their hydraulic modelling advisor to assist them in making the right decisions to meet their responsibilities, while ensuring that top quality controls are in place. As a reviewer and advisor to TCC, we help to generate growth by providing expert guidance and training to their internal and external consultants. Our global knowledge translates into local solutions for TCC. Our solutions have helped TCC address storm water, wastewater and water distribution needs across various dynamic, complex and fascinating terrains.

### HELPING TAURANGA ADDRESS ITS WATER MODELLING NEEDS

Tauranga, a port city with a population of around 123,500, is situated at the edge of the North Island's Bay of Plenty. It is New Zealand's fifth largest city. Maintaining a balanced combination of tourism and industry, Tauranga has a diverse local terrain. The region boasts thick forests and rolling hinterland, with farming, residential, urban and coastal areas, all in a relatively small space.

We have been working closely with TCC since 2009 to provide the tools and expertise required to address the city's ongoing water modelling needs.



Tauranga Harbor from afar © Abaconda Management Group Flickr

### SUMMARY

#### CLIENT

Tauranga City Council (TCC)

#### CHALLENGE

Developing an overall plan to address Tauranga's water modelling needs

#### SOLUTION

- Creating a long-term strategy to address the city's water issues
- Reviewing current wastewater network modelling framework
- Ensuring quality controls are in place while fostering a relationship with TCC and its consultants

#### VALUE

- Having a reliable advisor who understands TCC's long term needs in the local context
- Having the assurance that the highest level of quality control is in place
- Upholding mutually exclusive information channels for water problems
- Lessening the impact of flooding incidents on damage to infrastructure from the start

#### LOCATION / COUNTRY

Tauranga, North Island, New Zealand

## FORMING A STRATEGY FOR TAURANGA

In July 2008, TCC commissioned us to carry out a review of their wastewater network modelling requirements and to develop a strategy that would guide future investment in this area.

After understanding TCC's existing modelling framework, we set about creating a sustainable modelling capability for the development of their wastewater systems. We also put together a strategy report which covered immediate, medium and long-term activities to help TCC meet their objectives.

The resulting pilot project in 2009 saw us shape best practices for modelling, which later formed the basis of an overall modelling plan for the city.

The benefits for TCC were:

- internal consistency
- use of a familiar platform
- protection of investment as time and money was saved from the start
- quality assurance
- having direct access to current and comprehensive models and results
- immediate access to our consultants

As our collaboration progressed, we learned that TCC had long-term objectives that went far beyond wastewater needs. We took the opportunity to broaden the scope of our input to offer TCC a strategic service for long-term water modelling across future stormwater and water distribution systems.

## STORMWATER SOLUTIONS

Currently, we work both closely in a 'hands-on' role, encapsulating mainland catchments areas, and in a 'hands-off' role, offering project advisory services for other external consultants in the field.

Tauranga's water quality is affected by New Zealand's varied climates and heavily increasing tourism figures in popular coastal areas. We worked with TCC in various catchment areas with different characteristics due to its topographically diverse terrain. For example, Mount Maunganui, which together with Papamoa—Tauranga's largest suburb—form the 'coastal strip', is built on sand dunes, high pervious terrain and extends not only to port, but also to industrial, commercial and residential areas. Papamoa, on the other hand, is predominantly residential and is serviced by one large open drain—the Wairakei Main Drain, which rests on a historical stream bed of impervious 'parton' peat.

The permeability of soil types across other catchments in the area varies, gently undulating through the coastal plains of Tauranga Central, East, West and South East, making the TCC project a challenging one. The area is a combination of

natural lush forests, high urbanisation, rural farming and horticultural land. The need for quality water management is ongoing and quickly growing as new markets, such as wineries, begin to crop up in the greater Tauranga region.



*The Port of Tauranga © Brian Scantlebury Flickr*

## CONTRIBUTING TO KEY DECISION MAKING

We are instrumental in guiding TCC to make the right decisions for their water environment. Our main focus is to listen to their needs from the start and work alongside them as a trusted expert to offer global, sound, and forward-thinking advice.

Our experts work with TCC's dedicated planning engineer almost on a daily basis. This alleviates significant planning pressures which requires an ongoing understanding and assessment of the dynamics of the hydraulic capacity of the TCC networks. Through creating a direct client channel, we are in the best position to provide expertise quickly and efficiently.

To stay relevant to TCC's needs, we are always reviewing these areas of our partnership:

- continual development of software tools to stay at the very forefront of technology
- consistent improvisation of methodologies in the field of water
- constant delivery of robust quality assurance

As a result of the close working relationship between our experts and TCC's consultants, we have directly contributed to key decision-making in the city's planning process.

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