







- Map C -

Mt Maunganui North Catchment

Flood Hazard Map
October 2014

Legend

Depth

	0.1 to 0.25
	0.25 to 0.5
	0.5 to 1.00
	Above 1m

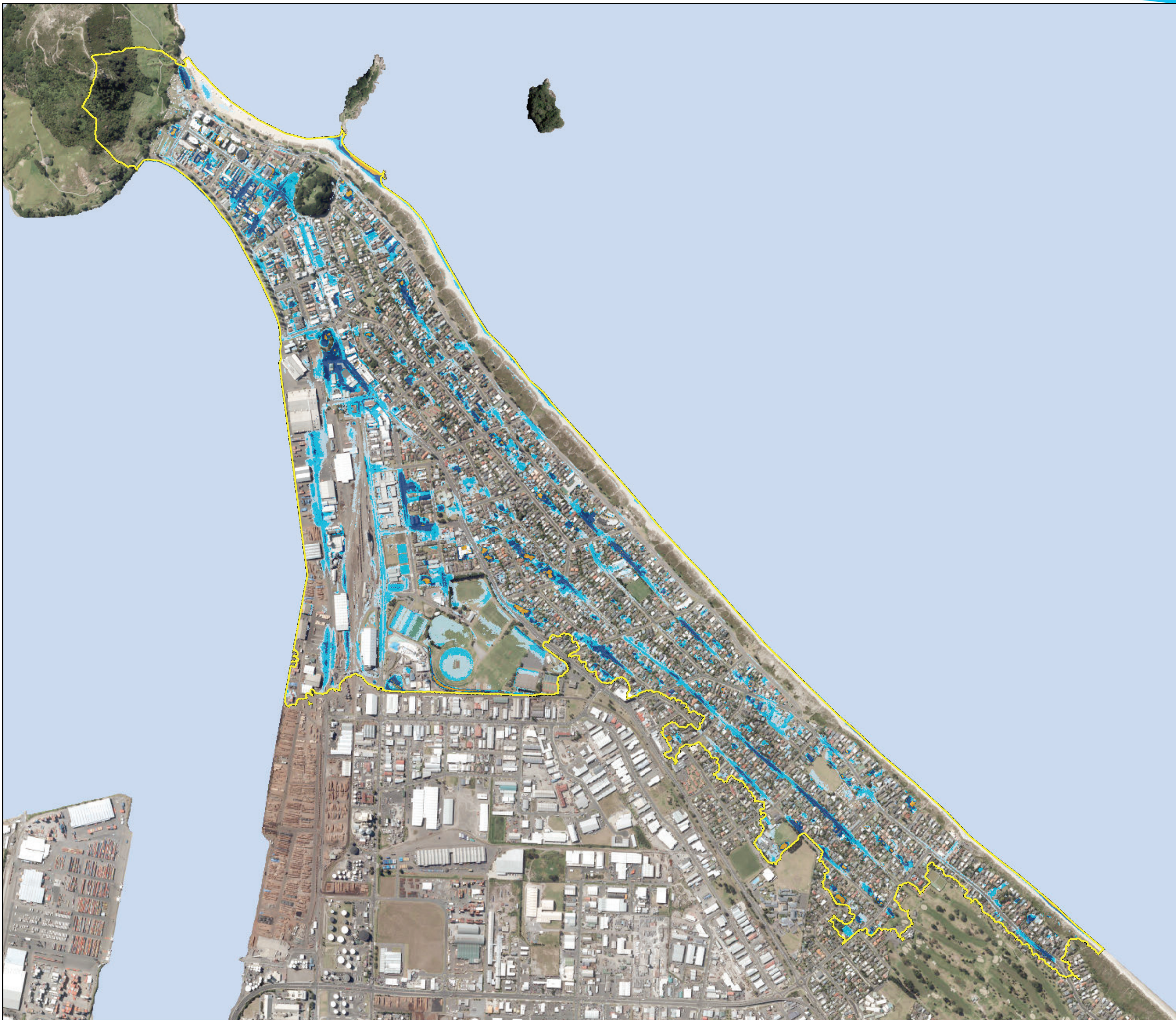
1:15,500 at A3 Size

0 0.35 0.7 Kilometers



Information shown on this plan is a result of 2D stormwater catchment modelling. The map is compiled based upon an assessment of the best available information at the time modelling was undertaken. Council will not be liable or responsible on any basis (including negligence) for any expense, loss, damage, cost or liability (including indirect or consequential loss) arising out of the provision of this information or its use.

03/11/2014



Questions and Answers About Flood Hazard Mapping Mount North



The map on the reverse side of this sheet shows which parts of Mount North are predicted to be affected by flooding in an extreme rainfall event.

Tauranga City Council is flood-mapping the whole city to better understand how flooding from extreme rainfall affects each area. The map updates flood hazard information that Council has previously held about this area. Using more accurate technology, the potential floodable area is shown to have changed since our records were last updated.

Why update flood hazard information?

Flood hazard maps show which areas of the city might be flooded in an extreme rainfall event, and to what extent.

It is part of normal Council business to know the effects of natural hazards that could impact our community. Flood hazard maps for Tauranga City have been evolving since the early 1990s. The information is used for building consents, subdivisions and infrastructure planning.

A lot has changed in recent years and we need our records to be as accurate as possible, so Council is in the process of updating flood hazard maps for the whole city. This will put Council in a better position to plan for stormwater management.

What is a 100 year rainfall event?

An extreme rainfall event is an unusual scenario, something that doesn't happen very often. It is a dump of rain that you could reasonably expect to experience at least once in your lifetime.

The flood hazard map is modelled for a 100 year rainfall event. The term '100 year event' can be confusing because such an event could actually occur more than once every 100 years. Technically, a 100 year event means there is a 1% chance that it might happen in any given year.

Tauranga City Council has chosen to model flood hazard maps for the 100 year event because it will allow us to consider building consent applications under the Building Act 2004 and subdivision consent applications under the Resource Management Act 1991.

How are the flood hazard maps prepared?

The area of land being studied is called a catchment. When rain hits the ground it all drains down hill to a particular stream or outlet. The stormwater catchment is the defined area of land that contains and collects all of that water.

To plot the potential flood hazard we build a computer model of the area that we wish to study. The flood hazard map predicts what happens to the water in the catchment under extreme rainfall conditions. We then use computer software to simulate different rainfall intensity on that catchment.

The basis of the flood hazard information is a system called LIDAR (Light Detection and Ranging) which measures the ground levels of the land using laser pulses. This generates an accurate contour map which we place into the stormwater computer model. LIDAR is very reputable technology used by most councils in New Zealand.

Our first job is to work out which criteria will be entered into the computer model. The sorts of things that need to be considered include:

- How hard is it raining?
- How long has it rained for?
- What is the contour of the ground?
- Where will rain water soak into the ground (e.g. grass)?
- Where will rain water flow over hard surfaces (e.g. roofs, concrete)?
- How long will it take for rain water to flow from one part of the catchment to another?
- What stormwater systems are already in place?

Technology today is able to take all of these variables into account. Once the criteria have been set we can run the flood hazard model. There is a huge amount of information to be computed so it takes longer than real time for the software to process each model. We run the model to calculate how, when and where the rainwater flows. The result tells us which parts of the catchment are likely to be covered by water, and to what depth.

When the model is complete it gets loaded into our GIS (Geographical Information System) mapping system for further analysis and processing. The information needs to be tidied up to the point where it can be presented as an accurate map. Once this is done the final map is peer reviewed. The flood hazard map is now valid and active.

Overland flow paths

As well as modelling for depth, we also model the speed and direction of flood water. This gives us important information about where flood waters flow during a heavy rain event. This 'overland flow path' information is not shown on the general flood hazard map but it is viewable on the Council's mapping website and is publicly available along with the rest of Council records.

What is Council doing about flooding?

The more accurate our information is, the better Council is able to plan for stormwater management in the most efficient and cost effective way.

The updated flood hazard maps will be used to help prioritise where and when spending should be invested into stormwater infrastructure across the city. A city-wide strategy is being developed to help Council address stormwater issues now and into the future using a combination of infrastructure and planning tools.

The strategy will be created for the Council's next round of major decisions about stormwater investment which will be made when preparing the Long Term Plan in 2015.

Does this flood hazard information go on my property file?

Yes, the updated information has been stored on the files relating your property and on our GIS mapping system. Flood hazard information for every property has always been publicly available on request. It is noted in Land Information Memorandum (LIM) reports and used when reviewing building and resource consents.

We are required by several acts of Parliament to hold this information and to make it publicly available. As custodians of this information we will always provide the most up to date information that we have available about your property.

Will this affect my insurance?

Council can not advise you about any effect that this information might have on insurance. In this matter you may wish to contact your insurance company.

If you have any other questions...

Please call Council on **577 7000** or visit our website www.tauranga.govt.nz