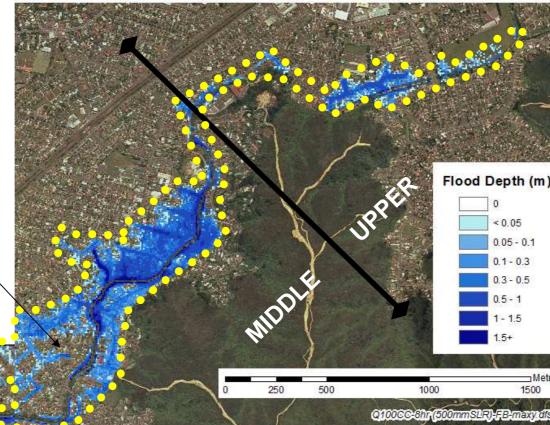
## The Waiwhetu Stream 1-in-100 year flood model

## **Current Planning Controls;**

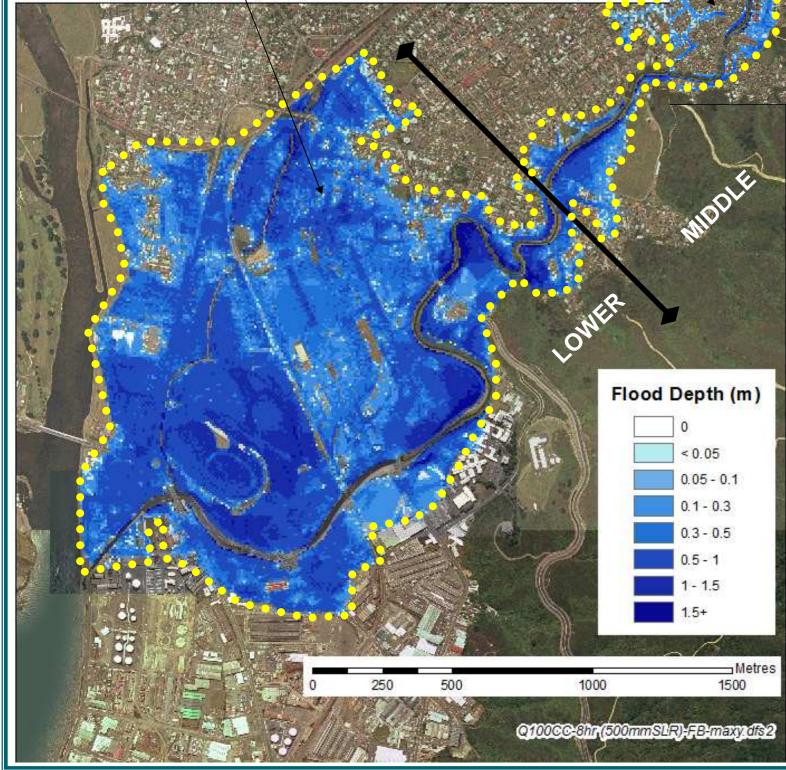
**Density** - Planning measures currently control in flood prone areas how small a section (lot size) can be when subdivided

Floor Levels – Building act currently requires minimum floor levels for new development at the 1-in-50 year flood event



0.3 - 0.5

1.5+



621 properties are currently estimated to have flood water inside the house in a 1-in-100 year flood event

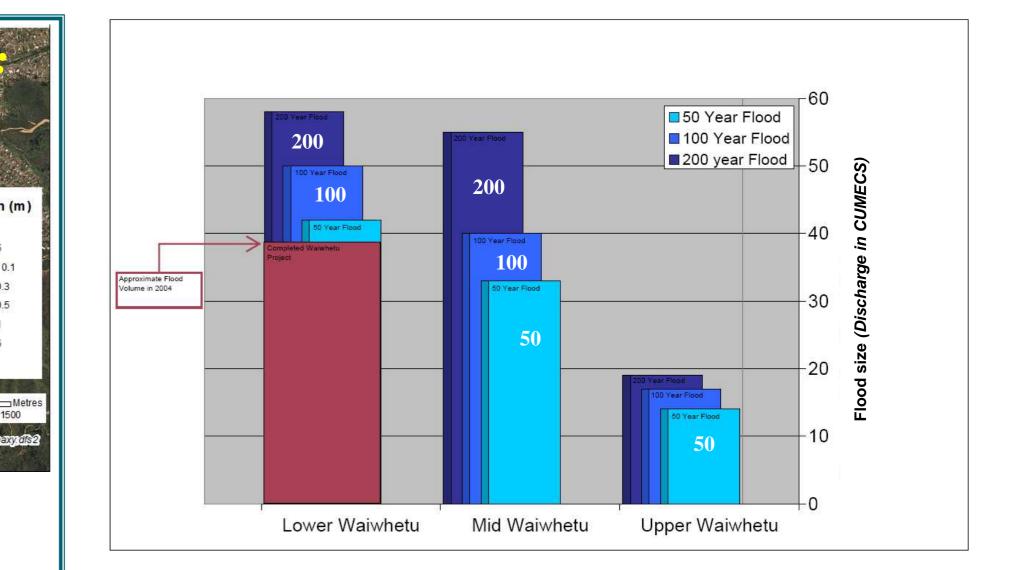
## Current Situation

The flood spread shown above is for a 1-in-100 year return period flood in the Waiwhetu stream.

This flood spread includes climate change predictions.

The flood spread shows there is a lot of development already in the floodable area.

## Waiwhetu Stream Floodplain Management Plan – Options Development



The graph above shows flood volumes for flood events of 50 year, 100 year, and 200 year return periods. This graph is a tool used to target a desired level of flood risk management, and apply flood risk management techniques to address the varying size of floods. Each of the different size floods has its own bar, as they are independent of each other. This means that although you may manage completely a 50 year return period flood, you don't do much to the 100 year flood, but you would manage every flood of less than 50 year return period.

The red colour bar that covers part of the Lower Waiwhetu flood hazard represents what has been achieved by the works carried out to widen and deepen the lower part of the stream. This means that all flooding below this level of protection is now managed by these works and the community is now safe from those events. However the risk still exists for floods greater than the 2004 event.

