



Williamstown Drainage Study PFAS Investigation and Management Program

Background

In October 2017, Defence engaged Umwelt to commence a drainage study of the Williamstown, Fullerton Cove and Salt Ash local catchment areas. The aim of the study was to better understand the capabilities and limitations of the existing drainage network, within the Williamstown region, and to determine if any engineering improvements would positively impact on the efficiency of the network.

The study examined a number of catchments including Dawsons Drain, the Ring Drain, Moor's Drain, and Tilligerry Creek.

The study involved the development of a detailed computer flood model, to better understand the current behaviour of the drainage network.

The model was used to simulate the effectiveness of potential standard engineering options for upgrades and their impact on the efficiency of the network, to provide a better understanding of the capacity and limitations of the drainage network. The outcomes of the simulations were then analysed and compared to the current network conditions.

The study found that, where engineering options were analysed, only marginal improvements in drainage network performance could be predicted.

This project was undertaken in consultation with the Port Stephens Council, Office of Environment and Heritage, NSW EPA, the Hunter Water Corporation, and the Water Working Group.



Drainage Study FAQs

Q: What sort of modelling did the study develop?

The study was based on a Two Dimensional Finite Element Hydrodynamic Model, which simulates terrain and the way that water behaves during rain events.

Q: What simulations did the study run?

Modelling conducted in the study measured drain performance against different simulated rainfall events, including ranging from 'one-in-two year' rain events to 'one-in-100 year' rain events.

Q: Does the study make any recommendations regarding the drainage network?

The role of the study was to develop a modelling tool to assist in informing future works on the drainage network. However, it does model the outcomes of a number of typical engineering options to provide information that could be considered in further investigations and management plans.

Q: Will works be undertaken as a result of the study?

The modelling from the study will be provided to Port Stephens Council and the Office of Environment and Heritage (which manage portions of the drainage network), to contribute to the knowledge required and inform future management and development.

Q: Has the study identified anything that may affect the environmental investigation to PFAS contamination at RAAF Base Williamstown?

The presence of PFAS was not addressed in this study, however, the study does recommend that PFAS contamination is considered in the future management of the drainage network.

Q: Where can I go for more Information?

The Williamstown Drainage Study Report is available at:
www.defence.gov.au/environment/PFAS/studiesandtrials.asp

