

Unlocking the full value of a flood model

Wednesday 18th June



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Flood Platform

by **Jacobs**

Presenters



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Poll: How do you contribute
to flood models?



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Agenda

- The Value of a Flood Model
- Current Practices in Model Management
- Challenges in Management Methods
- Treating Models as Assets
- Live Demonstration
- Q&A

Poll: What is the cost of the
average flood model?

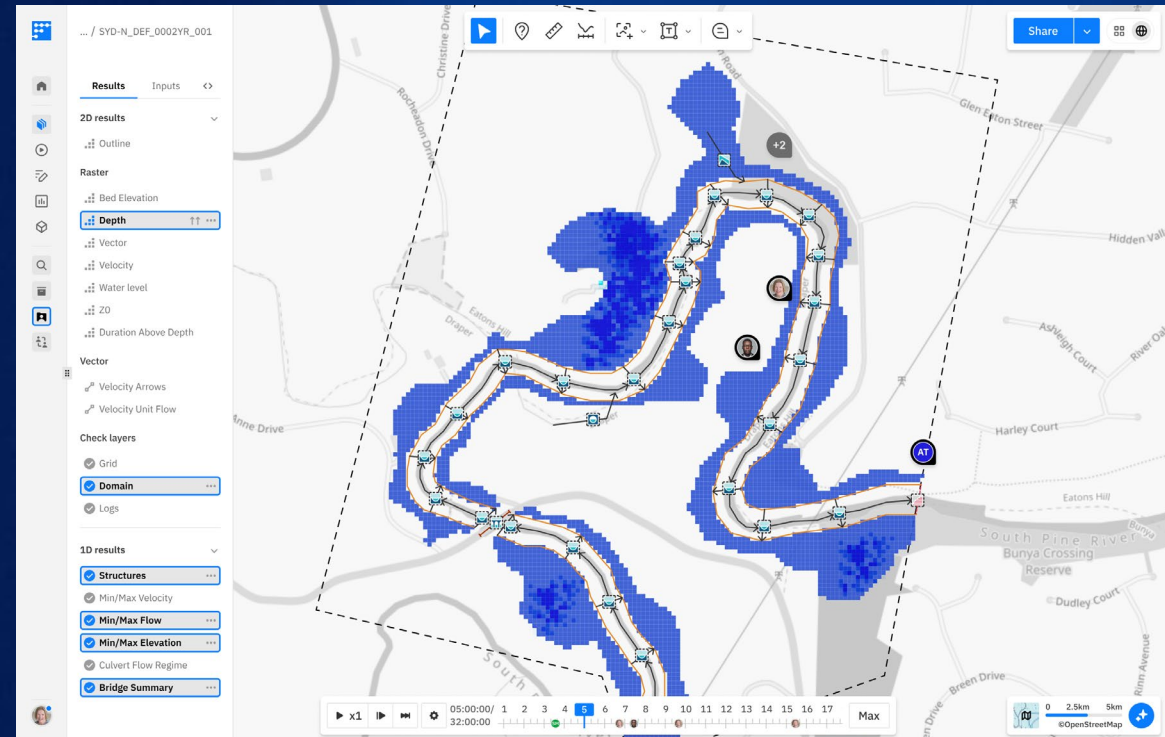
Model Cost $\neq$ Model Value



Flood Platform

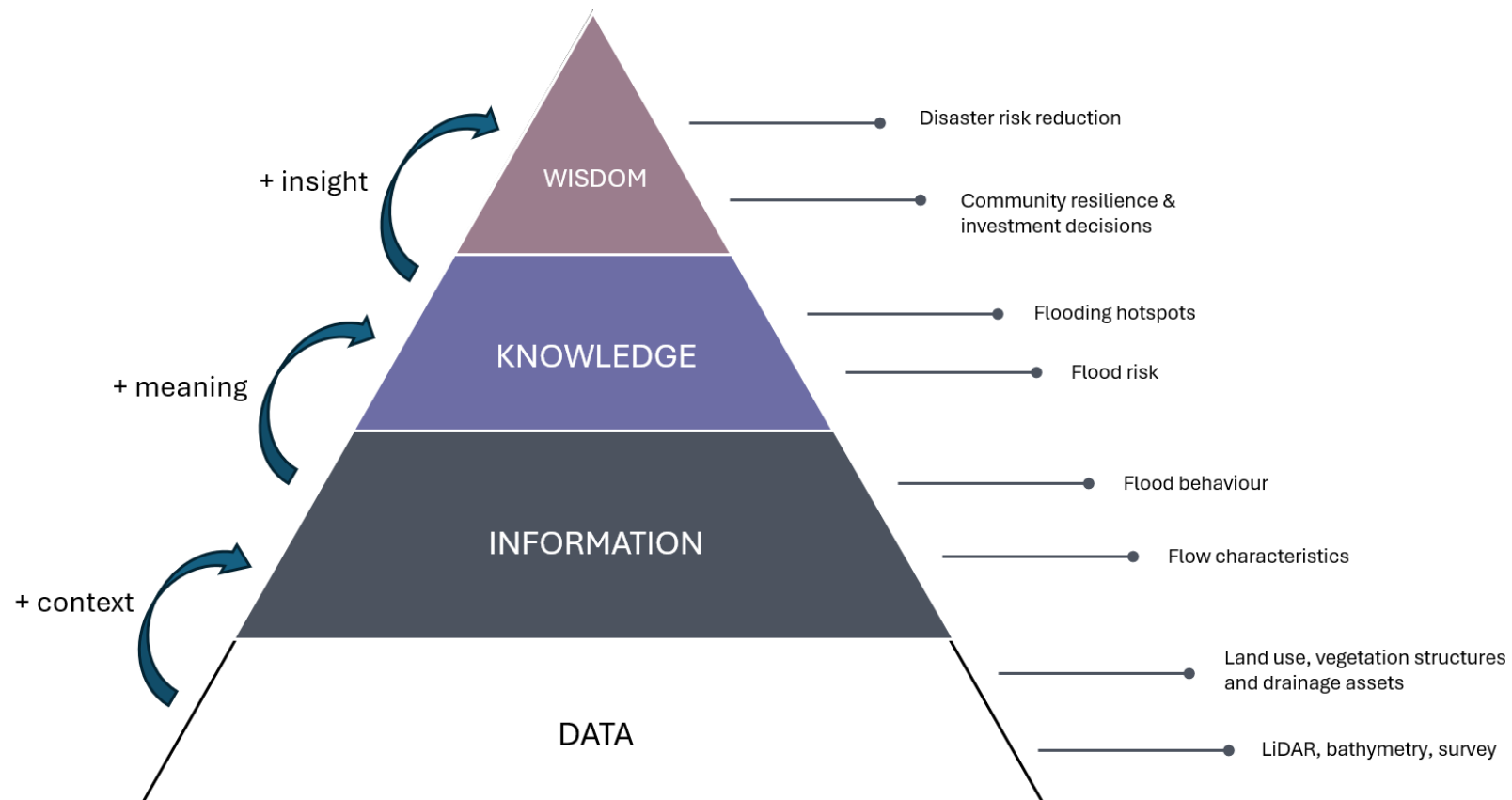
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The Value of a Flood Model



The Value of a Flood Model

The data-information-knowledge-wisdom hierarchy



The Value of a Flood Model

Informing Policy & Planning



Flood Risk Mapping



Flood Management



Infrastructure & Site Design





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Current Practices in Model Management



Current Practices in Model Management

- Gather data
- Build a model
- Document version and decisions in excel
- Get model reviewed
- Plot 437,280,347 flood maps in PDF report
- Get report reviewed
- Handover report + model on encrypted hard drive or share site
- Model left to gather dust



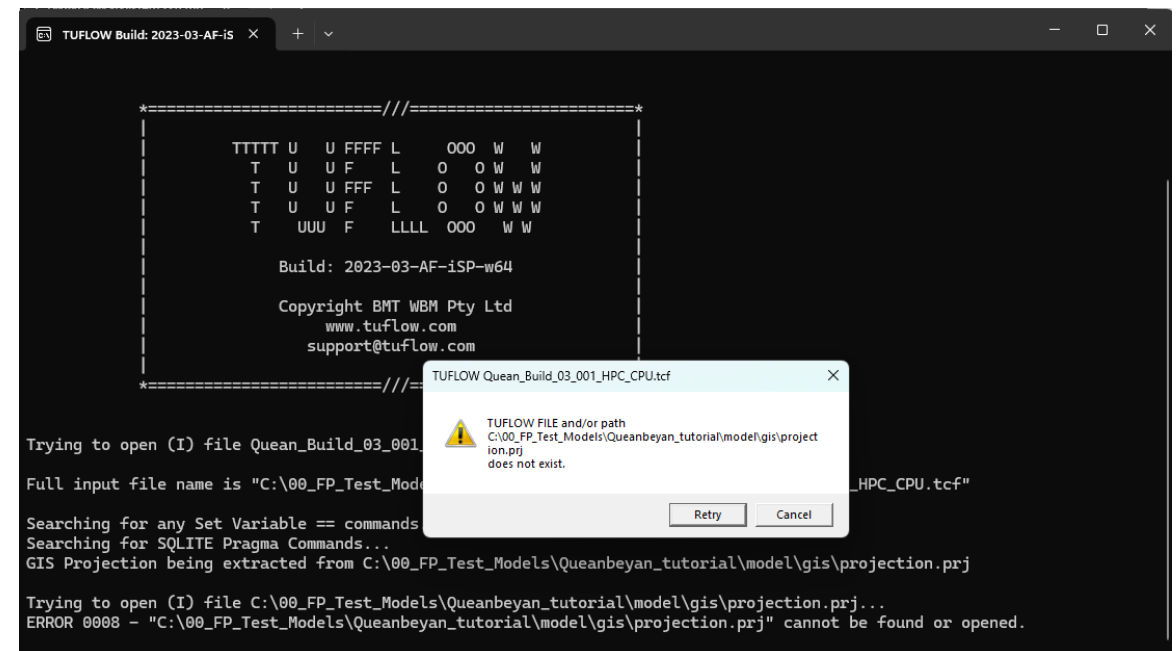
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Challenges in Management Methods



Challenges in Management Methods

- Lost source data
- Poor knowledge transfer
- Multiple copies & versions
- Time wasted finding models
- Lack of consistency in naming conventions / structure
- Wrong / mismatch results
- Lost models
- Destruction of storage / hard drives
- Expensive model rebuilds





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Treating Models as Assets



Treating Models as Assets

Characteristics of the flood models that we create

**Physical
(made of bits and bytes)**

**Retained to support business
decisions**

**Cost of the model can be
measured**

**Not intended for sale by a Council,
Agency or Organisation**

Requires maintenance/upkeep

**Use/usability may depreciate over
time**

Treating Models as Assets

Plenty of other industries are doing this..

Water Networks

Buildings

Software

Systematic data collection

Routine updates / calibration

Incremental improvements over time

Single point of truth / version controlled

Well documented

Consistent data structures, naming conventions



Thursday, 19 June 2025

NSW Flood Data Portal

Administered by the Geospatial Intelligence Team
of NSW State Emergency Service

flooddata.nsw.gov.au

For council, consultants and users in floodplain management industry

Become a registered user via the Register Button in top right

- ❖ Do not use personal emails – only professional domains will be approved access
- ❖ All study reports completed since 2017 are publicly accessible
- ❖ Owners of datasets assign access for registered users to download datasets (unless made public)
- ❖ Datasets are discoverable through SEED portal (<https://www.seed.nsw.gov.au/>) and data.NSW Portal (data.nsw.gov.au)

The screenshot shows the NSW Flood Data Portal interface. At the top, there is a navigation bar with the SES (NSW State Emergency Service) logo on the left and the NSW Government logo on the right. The main header reads "NSW Flood Data Portal". Below the header is a navigation menu with links: HOME, FLOOD PROJECTS, DATASETS, TEMPLATES, ORGANISATIONS, ABOUT, and HELP. The main content area features a search bar with the placeholder text "e.g. Location, LGA, study type or keyword etc." and a search button. Below the search bar are popular tags: DSEP, Dam Safety Emergency Plan, WaterNSW, and Dam Emergency Plan. The page is divided into two columns. The left column, titled "NSW Flood Data Portal Statistics", displays four statistics: 2.2k Flood Projects, 174 Organisations, 4.8k Datasets, and 879 Datasets (public). Below these statistics is a paragraph describing the portal as a joint partnership between the NSW State Emergency Service and the NSW Department of Climate Change, Energy, the Environment and Water, launched in late 2017. The right column, titled "Search Spatially for a Flood Project", shows a map of Australia with a focus on New South Wales. It includes a legend for "OpenStreetMap contributors" and two buttons: "Draw an Extent box" and "Enter coordinates". Below the map, there is a section titled "Select a location extent by:" with two bullet points: "Drawing an extent box, or" and "Enter the latitude and longitude coordinates." At the bottom of this section are two buttons: "Cancel" and "Apply and Search".



Projects and Datasets



NSW Flood Data Portal



HOMEFLOOD PROJECTSDATASETSTEMPLATESORGANISATIONSABOUTHELP

Home / Flood Projects

What are Flood Projects?

Flood Projects are studies and/or plans which have been developed as a part of the Floodplain Risk Management Process, to determine flood affectation and its effects, over a defined study area.

Location

Define search extent



Organisations

Mid-Coast Council (19)

NSW Department... (2)

River Basin

208 - Manning (14)

209 - Karuah (7)

Tags

Manning River (11)

Taree (9)

Harrington (7)

Wingham (7)

Add Flood Project

Taree

GO

21 Flood Projects found for 'Taree'

Order by: Relevance

Flood Project

Concept Design

Taree CBD Levee Feasibility Assessment

Completed

Publication date: 18/06/2024

Feasibility assessment of levee to protect Taree CBD, as identified in the Manning River FRMSP.

Flood Project

Post event flood behaviour reports

Manning River February 1990 Flood Report

Completed

Publication date: 01/05/1990

In February 1990 the Manning River and its tributaries experienced major flooding as a result of heavy falls over the catchment. A flood peak of 4.48m AHD was registered at the...

Flood Project

Flood study

Manning River - Flood Study

Completed

Publication date: 01/11/1991

This flood study of the Lower Manning River was undertaken to determine flood behaviour for the 5%, 2%, 1% and 0.5% probability floods and to identify the behaviour of an...

Flood Project

Flood study

Manning River Flood Study - Review and Update

Completed

Publication date: 01/04/2016

The Manning River Flood Study has been prepared for Greater Taree City Council (Council) to define the existing flood behaviour in the catchment and establish the basis for...



NSW Flood Data Portal



HOMEFLOOD PROJECTSDATASETSTEMPLATESORGANISATIONSABOUTHELP

Home / Dataset

What are Datasets?

Datasets are the different data components of Flood Projects, such as reports and spatial datasets.

Location

Define search extent



Organisations

Mid-Coast Council (16)

NSW Department... (2)

Tags

Manning River (13)

Taree (13)

Harrington (10)

Wingham (7)

Coopernook (5)

Farquhar (5)

Farquhar Inlet (5)

Feasibility Study (5)

Greater Taree (5)

Add Flood Project

Taree

GO

18 datasets found for "Taree"

Order by: Relevance

Taree CBD Levee Feasibility Assessment

Report PDFs - all volumes

Taree CBD Levee Feasibility Assessment Reports

Completed

Publication date: 18/06/2024

Taree CBD Levee Feasibility Assessment Reports

ZIP

Taree CBD Levee Feasibility Assessment

Hydrological, Hydraulic and flood damage model input files

Hydraulic Model TUFLOW

Completed

Publication date: 18/06/2024

Hydraulic Model TUFLOW

ZIP

Taree CBD Levee Feasibility Assessment

Collected Data

Collected Survey

Completed

Publication date: 18/06/2024

Collected Survey

ZIP

Taree CBD Levee Feasibility Assessment

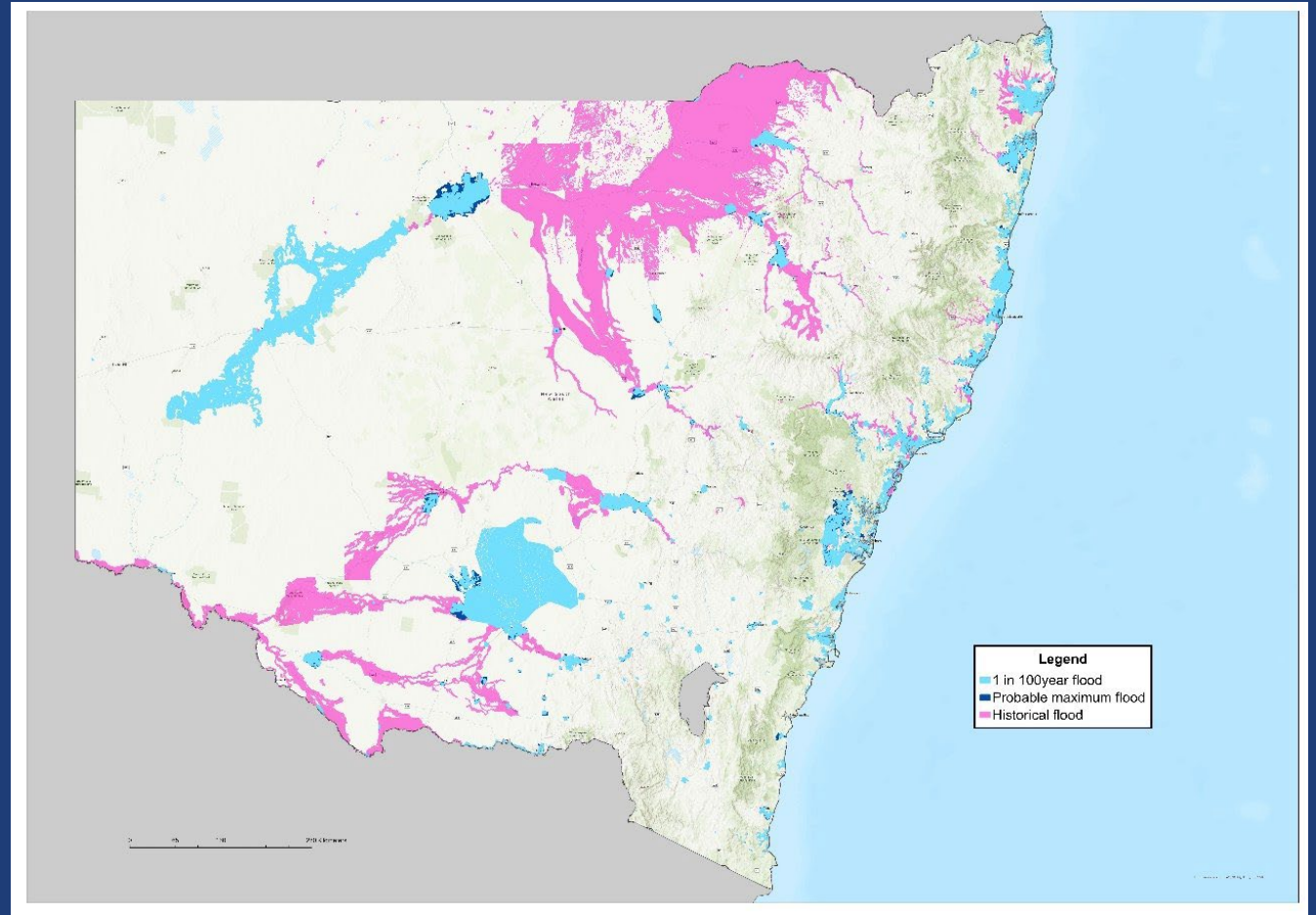
Hydrological, Hydraulic and flood damage model input files

19

Emergency Management Use

NSW Strategic Flood Database

- ❖ Data from the portal is processed into the NSW Strategic Flood Database (Govt. use only)
- ❖ This database is fundamental for our planning and preparedness processes in emergency response (e.g. Community Emergency Warnings)
- ❖ The database includes historic data which is collated by NSW SES at the end of major operational periods



Need Help?



Language

Plan and prepare ▾ During an emergency ▾ Recovery News and events About us ▾ Contact Volunteer ▾

[Home](#) > [Flood Data Portal registered user help](#)

Flood Data Portal registered user help

 [Listen](#) 

The [NSW Flood Data Portal](#) [↗](#) aims to improve the sharing of key flood data within government and to other stakeholders so that this information is more broadly available to be considered in decision making.

Data contained in the NSW Flood Data Portal is entered by each Local Council at the completion of floodplain risk management studies undertaken in their area. This data is then made available to government and other stakeholders via the portal.

This Help page aims to provide a resource to assist in using the Flood Data Portal.

[Expand all](#) [Collapse all](#)

Creating a flood project ▾

Adding datasets and resources to a flood project ▾

Managing flood projects ▾

Markdown formatting ▾

Frequently asked questions ▾

User guides ▾

Need some assistance?

Contact the NSW Flood Data Access Team at nswflooddataaccess@ses.nsw.gov.au .

Visit the [NSW flood data access](#) page for more information.

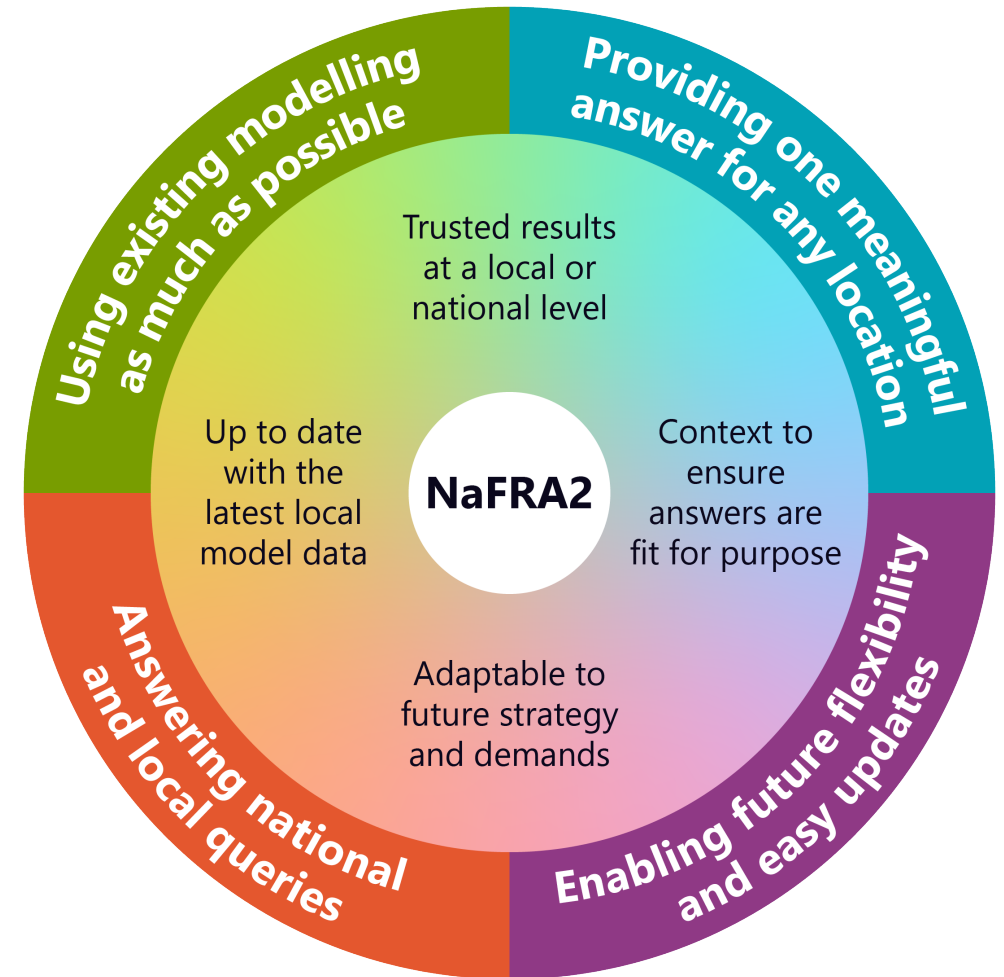


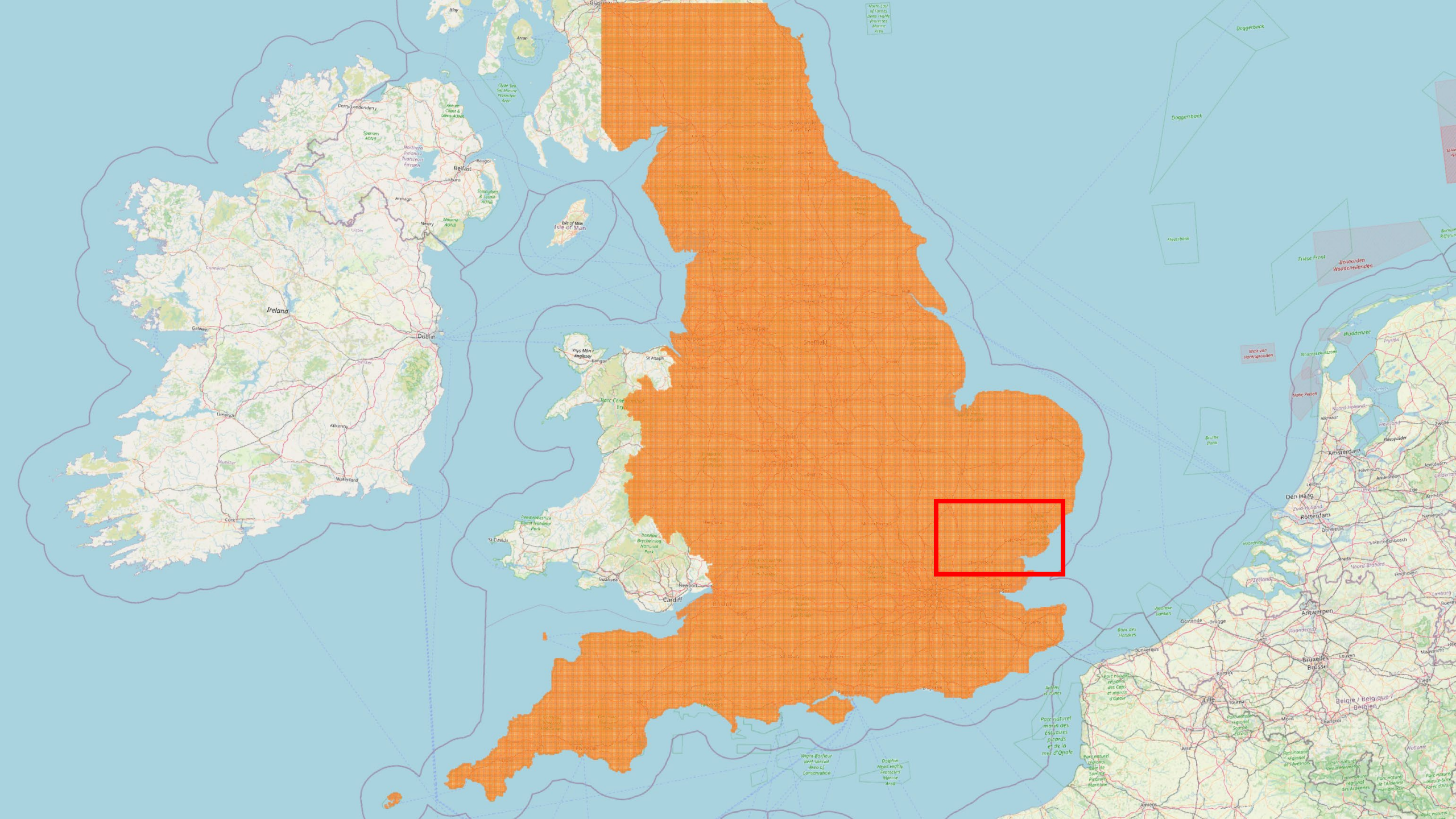
NSW Flood Data Access Program

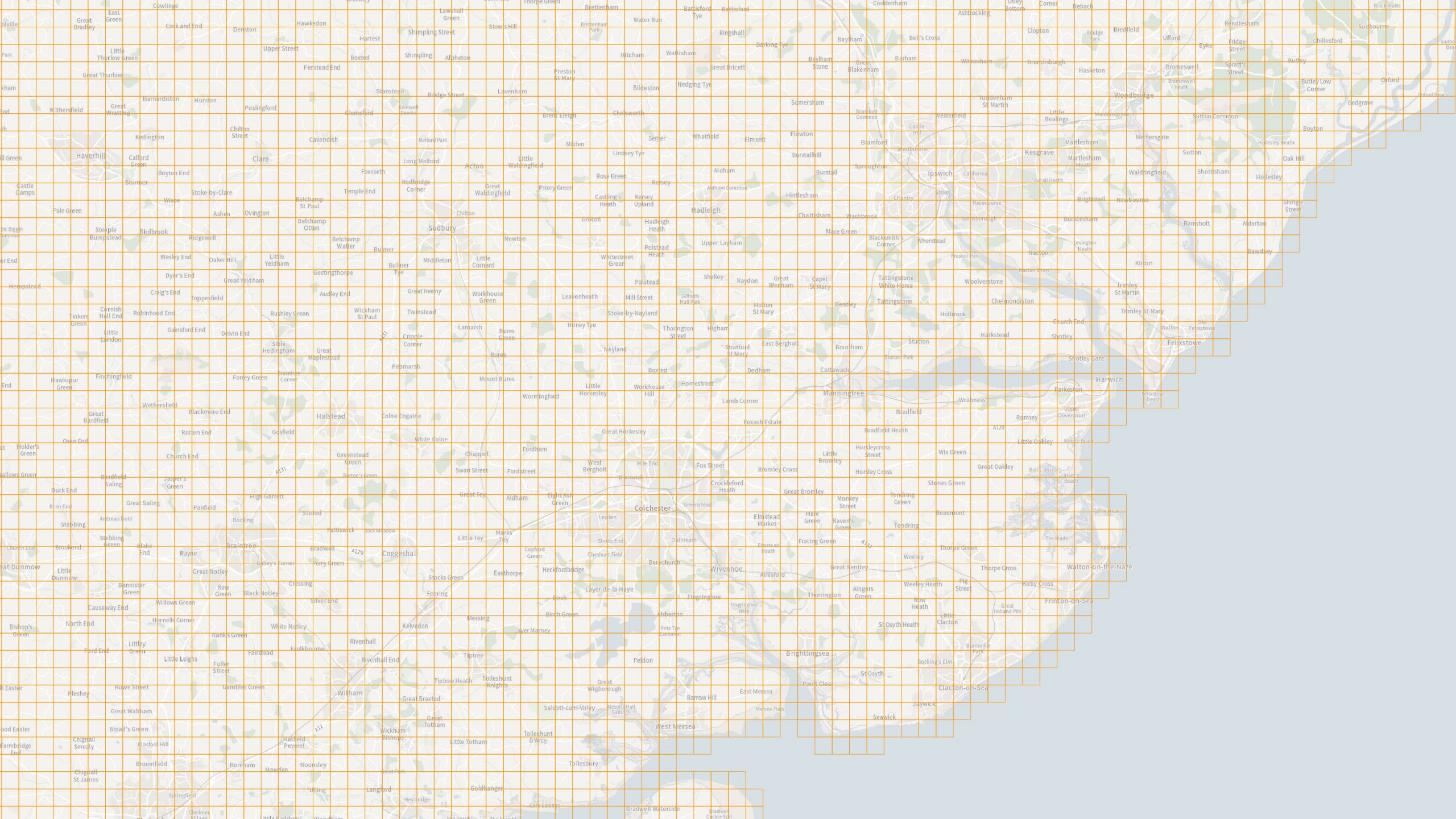
<https://www.ses.nsw.gov.au/flooddataportalhelp>

England's National Flood Risk Assessment

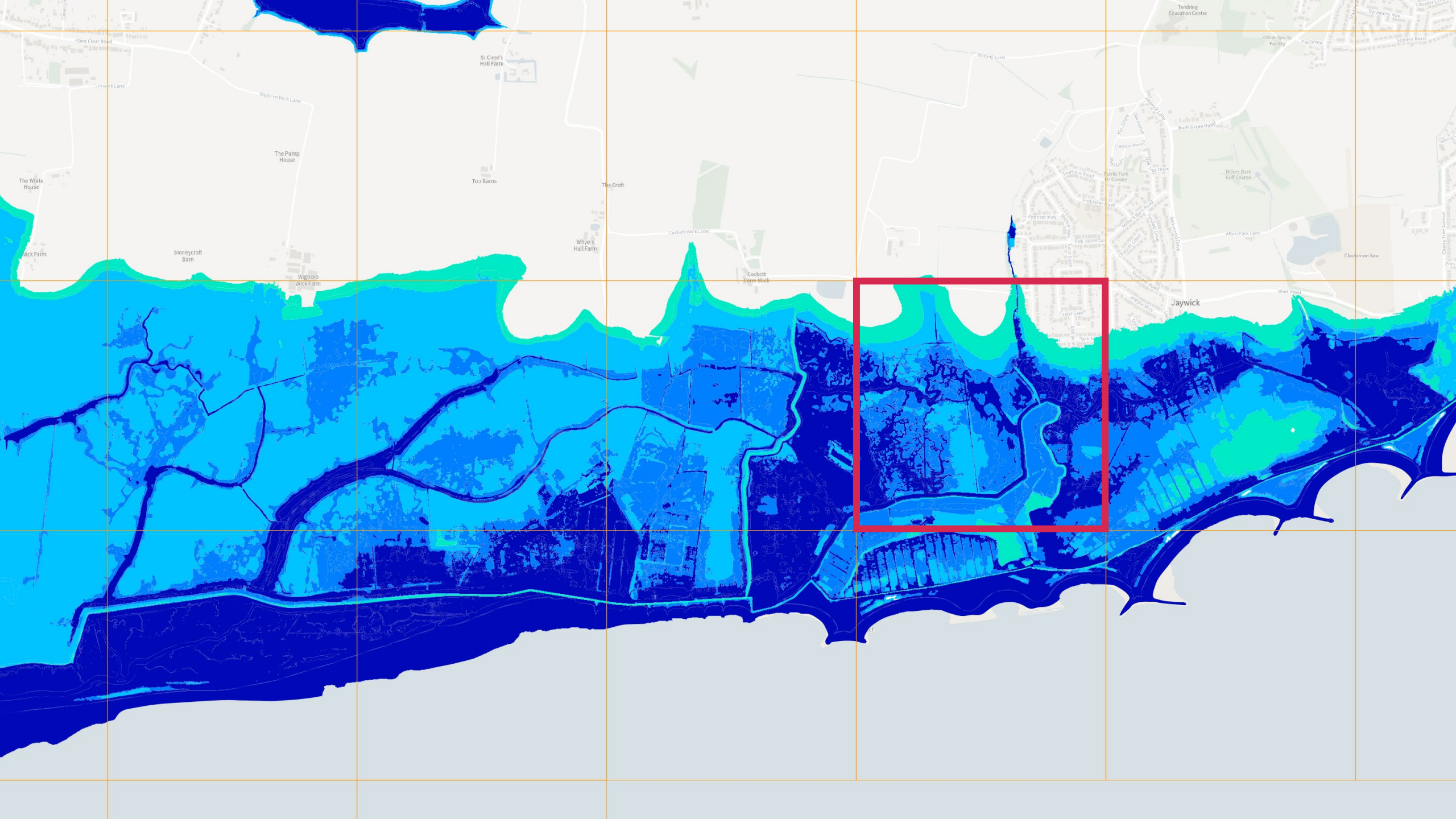
- The new national flood risk assessment
- Updated national flood mapping
- A scalable cloud computing system that:
 - Makes best use of available Environment Agency and third-party data
 - Closes the gap between the local and national pictures of risk
 - Can continue to be updated and adapted to stay up to date and relevant for years to come
- New national flood modelling

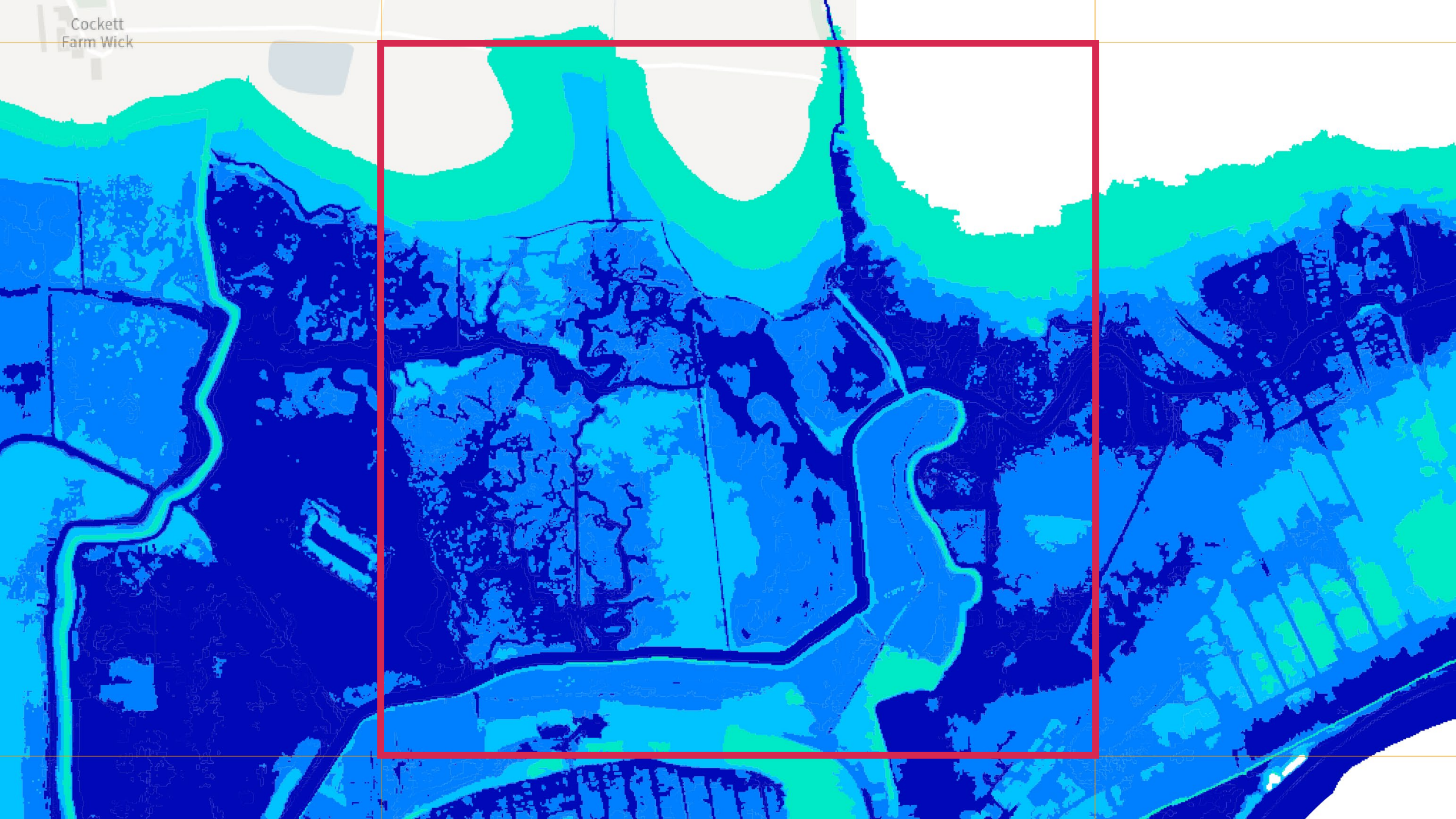








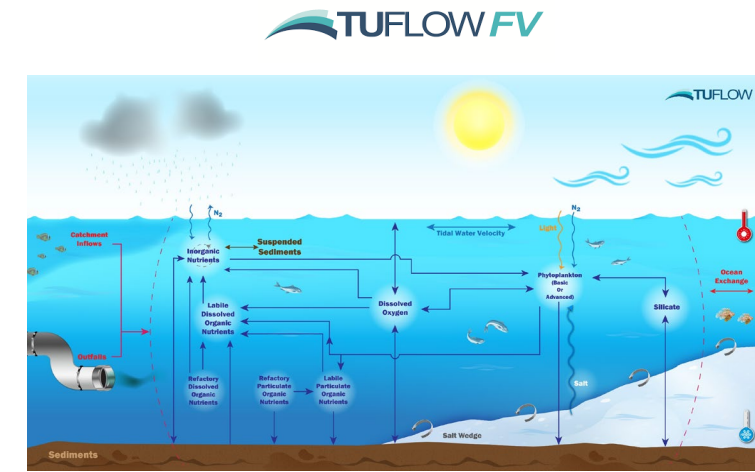
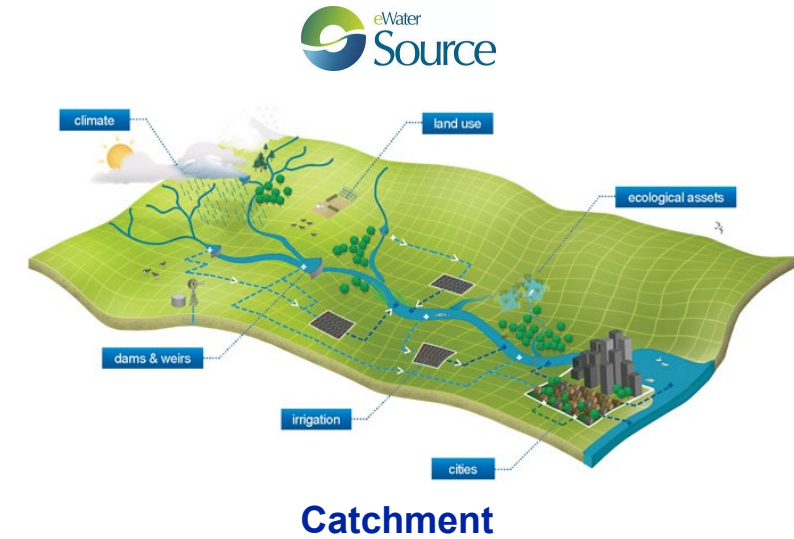




Sydney **WATER**

Hawkesbury Nepean Case Study – Model Provenance

SW Engineering Modelling



Receiving waterway

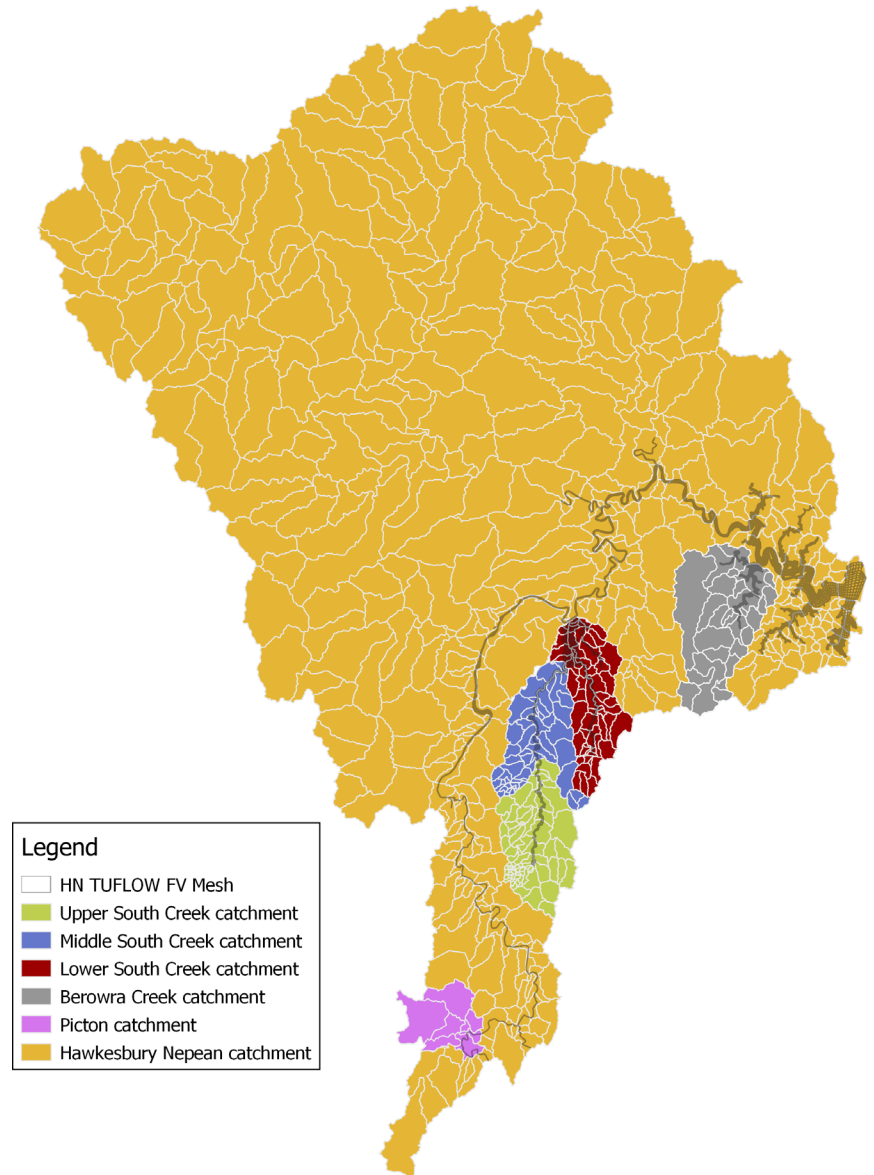
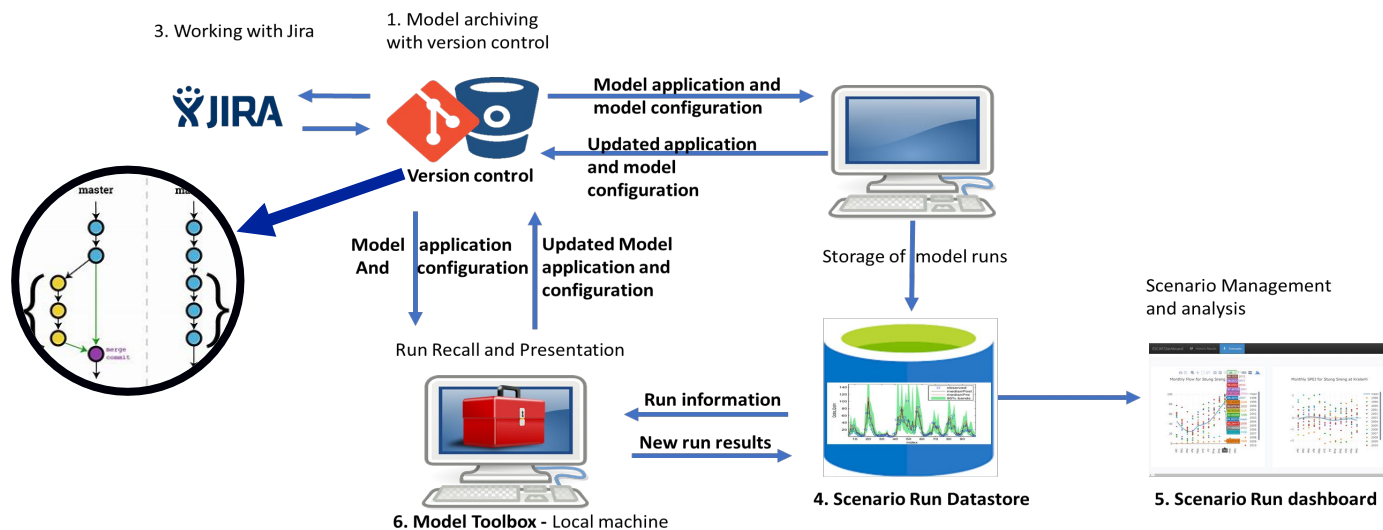
Hawkesbury Nepean Case Study – Model Provenance

Waterway model applications

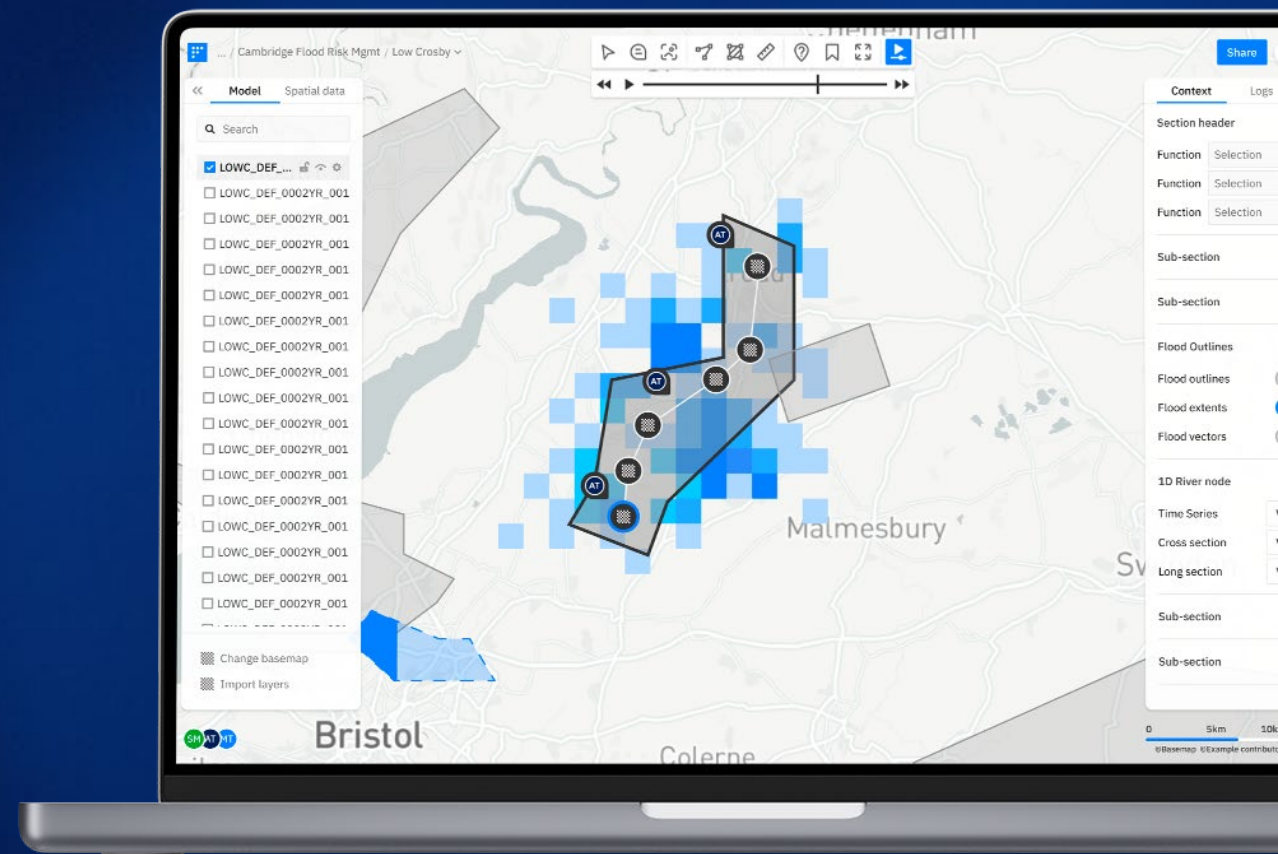
- Environmental approvals and negotiations
- Regional, sub-regional and precinct planning
- Research and development

Key benefits

- Security and traceability
- Transparency and flexibility
- Ability to design around models, rather than projects
- Integration with cloud-based services



Live Demonstration



Questions





Flood Platform

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Thank you.

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www.floodplatform.com