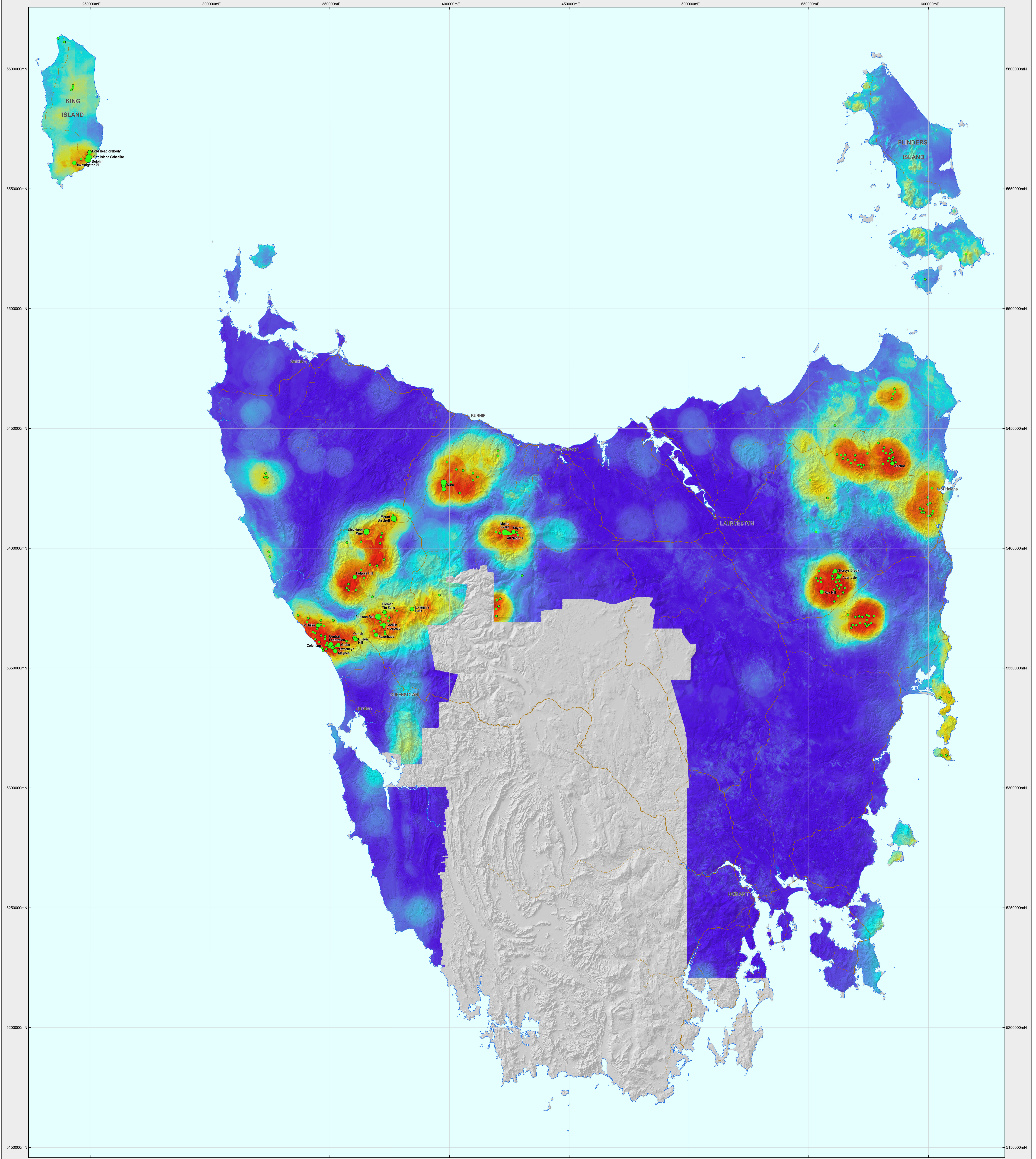


TASMANIA - GRANITE RELATED TIN-TUNGSTEN-FLUORINE-RUBIDIUM PROSPECTIVITY



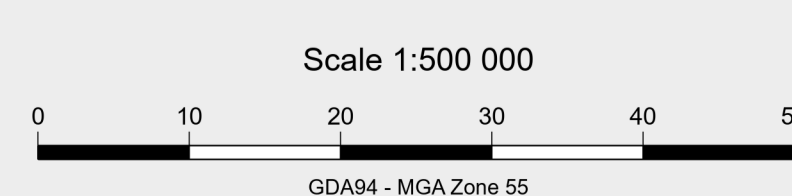
Data Specifications

This map displays the output of a random forest machine learning model trained to predict the prospectivity for granite-related tin-tungsten-fluorine-rubidium mineralisation across Tasmania. The model was developed at Mineral Resources Tasmania using geological, geophysical, and geochemical datasets. Input datasets include 1:250,000 geology mapping, airborne magnetics, gravity, radiometrics, digital elevation data, magnetotelluric data, and rock chip and drillhole geochemical data.

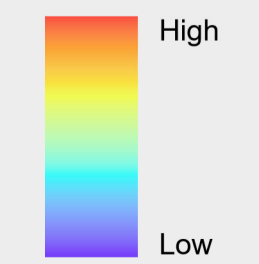
The model was trained on 210 known hard-rock granite-related tin, tungsten, and fluorine deposit locations, weighted by deposit size. Random negative training points were generated across the study area, excluding a 1 km buffer around known deposits. The random forest algorithm was implemented using the scikit-learn library in Python with 500 decision trees. The output is a probability grid with a grid size of 40 metres, where pixel values ranging from 0 to 1 represent the proportion of trees classifying each location as prospective.

Pixel colours are rendered using a standard blue-to-red heat map, where cool colours indicate low prospectivity and warm colours indicate high prospectivity. These colours represent the relative estimated prospectivity across the state and do not indicate the presence of a deposit and provide no indication of economic viability of any potential mineralisation.

Department of State Growth
MINERAL RESOURCES TASMANIA



Prospectivity



Training Points

- Sn-W-F-Rb deposits

Acknowledgements

Data used in the modelling were sourced from Mineral Resources Tasmania (MRT) and Geoscience Australia (GA). Some of the MRT datasets include compilations of data submitted by exploration companies. The prospectivity modelling was refined through consultation with the Geological Survey Team at MRT.

Modelling: T Czertowicz

Map produced by the Spatial Information Services Section of Mineral Resources Tasmania

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