



ENGINEERING GEOLOGY

Our approach

The Engineering Geologist plays a key role in the planning and design of tailings storages, water dams and associated infrastructure by conveying the impact of the geology and geomorphology on a civil engineering project. The Engineering Geologist's understanding of the interaction between the earth and the proposed structure assists in the development of a safe and cost-effective design.

HATS believes that involvement of the Engineering Geologist, particularly at the early conceptual stage, can significantly reduce risks and costs throughout all life stages of a tailings or water dam project. Consideration of the engineering geology and formation of a conceptual geological model, that is then tested and developed through phased mapping and investigations, allows geological hazards to be identified then mitigated by site selection changes or by design adaptation.

A fundamental understanding of engineering geology principles, led by our Principal Engineering Geologist, is applied to each study, review and design project we undertake to provide a technically robust outcome.

HATS endorse the application of engineering geological interpretation for existing and closed facilities. This enables retrospective development geological models that can greatly assist in the understanding and accuracy of stability models and development of facility risk profiles.

Industry engagement

We are actively involved in the Australian Engineering Geology industry including participation in industry bodies such as Australian Geomechanics Society. Our personnel assist with the coordination of industry events, contribute to technical papers, and support education and training of future engineering geologists.

Our experience

HATS has delivered a variety of projects across the world for operations ranging in size, objectives, and stages. We have recently completed the following studies, projects and reviews:

- Preparation of a 3D Digital Ground Model for a Tier 1 mining client's existing tailings storage facility in Western Australia.
- Review and update of the Ground Model of a closed tailings storage facility in Indonesia.
- Development of a conceptual site model, field mapping, geotechnical investigations, refinement of the Engineering Geological Model and subsequent risk assessment for an historical tailings storage facility at a mid-tier mining client operation in Western Australia.
- Several ANCOLD Comprehensive Surveillance Reviews for a major water supply dam owner in Western Australia, incorporating review of ground conditions from an engineering geology perspective.

Contact us

Partner with HATS for your next study, design project or review and experience the true value we bring to the process with our in-house Engineering Geology capability.

Please contact Julia Bota, Principal Engineering Geologist | julia.bota@hatsconsult.com