

# GEOTECHNICAL INVESTIGATIONS

## Our approach

HATS understands the importance of Engineering Geology and Geotechnical Investigations in the planning of tailings storages, water dams and associated infrastructure. The involvement of the Engineering Geologist, especially during the early conceptual stages of a project, can significantly reduce the risks and costs throughout all life stages of a tailings or water dam.

HATS has in-house Engineering Geology and Geotechnical Investigation expertise. Throughout the appropriate phasing, scoping and completion of thorough and targeted geotechnical site investigations, we aim to negate the need for conservative and costly designs so that we support our clients in developing the most cost-effective solutions for their projects that also reduce associated project risks.

We utilise the same expertise to complete reviews that assess the expected performance of existing assets which result in a greater understanding and decreased risk to the facility owners.

## Our experience

HATS has recently delivered several geotechnical investigation projects in Western Australia recently for Tier 1 and Mid-Tier clients, that included the following tasks/ techniques:

- Desktop study, review of historical data and development of conceptual site models
- Field geotechnical mapping
- Landslide hazard assessments
- Scoping of geophysical investigations and borrow investigations
- Scoping, technical supervision and logging of intrusive geotechnical investigations:
  - Diamond coring and sonic drilling, hand auger boreholes and test pit excavation
  - Dynamic cone penetrometer, standard penetration and cone penetrometer testing
  - Undisturbed sampling and in-situ permeability testing
  - Installation of vibrating wire piezometers and monitoring wells
- Scheduling and management of laboratory testing schedules
- Factual and interpretive geotechnical reporting
- Refinement of conceptual models to EGMs and geotechnical models and 3D digital models.

Our geotechnical experience extends to other parts of the world, including the UK, Mexico, Kazakhstan and the Philippines. HATS geotechnical personnel have performed geotechnical investigations on both greenfield and brownfield sites on a range of projects including:

- Mine processing infrastructure, heavy haul rail/roads, ports, wharfs, dry docks and bridges
- Tunnels, horizontal directional drilling and trenched pipelines
- Public road/rail upgrades and extensions, commercial and residential developments
- New nuclear reactor, renewable energy projects and land reclamation.

## Contact us

Partner with HATS for your next geotechnical investigation and experience the true value we bring to the process with our in-house Geotechnical Investigation capability.

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