

## Capability Statement (Mining)

### Services

ABES provides structural engineering services to the mining industry in Australia and internationally. We can provide the following structural design services:

- design of foundations, retaining walls, portals and related infrastructure,
- design of storage facilities and industrial structures,
- design of infrastructure needed on access and haul roads,
- repair and rehabilitation of damaged structures and mechanical components,
- inspections of structures, structural components and mechanical parts.

ABES engineers have extensive experience in the application of high-end analysis software. We have a solid track record in solving complicated analysis problems and we are capable of turning analysis results into practical solutions.

ABES will give their full attention to every job that we contract to do. No job is too small; and no job is too big since we are part of an international group of structural engineering firms from which we can draw know-how and manpower if necessary. We acknowledge that certain jobs need urgent attention. We are prepared to help wherever and whenever our services are required.

ABES are flexible and willing to cooperate in various ways with our clients depending on what works best in a given situation. We are prepared to lead and manage project teams; or we can work as part of an established team on a large project and support other members of this team with their analysis or modelling tasks. Or we can solve specific isolated tasks and return a report and a model if desired.

ABES directors Andrew Wheeler and Martin Pircher both hold PhD degrees in structural engineering and both have long histories of computational mechanics. They have both worked as structural engineers as well as software developers. All work for clients in Australia and New Zealand will be closely supervised or performed personally by either Martin or Andrew in line with our ISO 9001 quality assurance policy.

### Clients

ABES seek to work with mining companies directly, and also as a sub-contractor to established firms providing engineering services to the mining industry. We understand that structural engineering is only a small part of the engineering needed to ensure that a mining operation is running smoothly. We aim to fulfil this small part to perfection.

### Areas of Expertise

ABES areas of expertise include, but are not limited to, the following topics:

- General structural engineering of buildings, industrial structures, foundations, retaining walls, bridges and mechanical components,
- Finite element modelling,
- Linear and non-linear structural analysis,
- Steel, concrete or composite structures,
- Structural dynamics including vibrations, moving parts, earthquake and wind dynamics.