engineered by application
Retaining Solutions Design Construct Pty Ltd (Retaining Solutions) is a privately owned and operated Australian company. The company was established in 2004 as a specialty design, project management and construction contractor, knowledgeable and capable of providing the commercial, industrial, transport infrastructure and mining sectors with grade change solutions.
Retaining Solutions has rapidly become an industry leader recognised for its in-house design expertise together with an established network of industry partners including qualified and experienced structural and geotechnical engineers Australia wide.
Unlike other companies in the field, Retaining Solutions offers a complete one stop shop providing preliminary, through to professionally engineered construction issue designs and drawings, full supply of specialist materials, and timely and efficient installation.
We are indeed a complete solution provider.

Professional in-house design services

Supply of a range of recognised systems

Installation using our own plant, equipment and labour

Streamlined approach to the design, supply and install interfaces

Major infrastructure through to smaller subdivision works

10 years + experience

Australia wide coverage

Full project management and on-site supervisory services
Finding the right retaining solution

Choosing a retaining wall solution requires an intimate knowledge of the mechanics of retaining wall design and the way in which available techniques can be applied.

Specifically, two basic approaches to retaining wall design are offered by Retaining Solutions. These are:

- Gravity walls which are well suited particularly to retainment of cut embankments and lower height structures.
- Reinforced soil walls which are better suited for retainment of fill embankments particularly where height and loading becomes a significant factor. Reinforced soil walls use a soil reinforcement attached to the rear face of the retaining wall. This can take the form of:
  - Geogrid
  - Geosynthetic strips
  - Galvanised steel straps or ladders
Soil reinforcement can be extensible or inextensible and have either a positive or friction connection to the facing unit. It’s critical that this information is incorporated into the design as well as the essential backfill properties.

With our design, supply and install knowledge together with our industry wide links and partnerships, we are able to offer a diverse range of proprietary wall systems and solutions including:

- Reinforced Earth® Walls
- VSol® Retained EarthWalls
- Keystone® Walls
- MassBloc® Walls
- Loc A Bloc® Walls
- Earth Anchored Walls
- Allanblock® Walls
- Landmark® Walls
- Magnumstone®
- Steepened Reinforced Slopes
- TerraMet® Reinforced Earth Walls
- Reinforced Concrete Cantilevered Walls
- Gabion & Rock Mattresses
- Crib Walls
- Stonestrong® Big Block Gravity Walls
- Masonry & No Fines Concrete Walls

Each of these systems has a market niche for which they are most suited and once the right solution is identified, it needs to be engineered for the job.
Retaining Solutions can provide a comprehensive design service for a range of proprietary walls systems. In fact we are recommended as preferred designer by a number of the aforementioned system owners.
We offer to professionally undertake:
- Design liaison with lead designers to ensure design is exactly in line with the intent
- Preliminary design assessment, full costings and comparisons
- Solution recommendations outlining key advantages and disadvantages
- Full design including provision of design reports
- Full drafting service
- Design verification
- Design certification
- Construction certification
- Geotechnical verification

These services extend to all the wall systems that we supply, and with which we are intimately familiar. As professional civil engineers we have a detailed knowledge of proprietary wall design software as distributed by the respective system owners, and we are familiar with the appropriate relevant Australian standards and Main Roads Specifications.

Each and every retaining wall application requires careful assessment of physical, structural and geotechnical conditions. Our expertise extends to each of these critical considerations thus ensuring a fully engineered and complete solution which is professionally certified for durability and adequacy to perform its required function.

Our capacity to identify the most suitable product for a given situation ensures that you get a value for money yet a carefully engineered and reliable solution.
Retaining Solutions maintains a significant selection of specialist earthmoving equipment.

that is maintained and compliant for materials handling and earthworks and certified to begin work on the most safety conscious of sites. Our many years of experience has ensured that we have selected and utilise equipment that is best suited for safe and efficient wall construction.

Plant Hire Solutions

In addition we offer Plant Hire Solutions (a division of Retaining Solutions), a service offering earthmoving equipment for hire. The equipment is hired out with ticketed, competent operators on a ‘wet hire’ basis. We specialise in all types of earthmoving operations ranging from small to large scale, bulk earthworks, highway construction, dam construction, haul road construction, railway formation, subdivisions, irrigation channel, mining, mine rehabilitation and canal and harbour construction.

We can provide a range of bobcats, excavators, rollers and franna cranes at a moment’s notice.
plant and machinery
We offer solutions for design, supply and installation of dump structures, reclaim structures, haul road overpasses, ground stabilisation and other heavy earthmoving applications in mine situations.
Mining projects often represent the largest and most heavily loaded structures undertaken, and are often located in the most remote and environmentally unfriendly locations. Construction programs are often tight and safety requirements are the most stringent in the world. Constructing these challenging structures requires careful planning and specialised expertise. Plant and equipment must comply with mine site regulations and crews must be fit, competent, trained and undergo full assessment and screening before being permitted to commence work. Retaining Solutions has now delivered numerous structures to major mining companies including BHP Billiton, Rio Tinto and Xstrata.
We offer design and construction solutions for bridge abutments, road widenings, approach ramps, embankment stabilisation and more....
Roads and bridges keep the country moving forward and over the last 10 years Retaining Solutions has installed some of the country’s most high profile transport infrastructure.

Roads authorities have their own stringent expectations in relation to design, construction and durability of their assets with design life usually extending to 100 years. In many cases only specifically approved proprietary systems are acceptable and an intimate knowledge of the asset owner’s own design methodologies is required.

Besides being intimately familiar with the specific design and construction requirements of each roads and rail authority in each Australian state, Retaining Solutions has a close working relationships with the asset owners themselves.
Our philosophy is only to design, certify and construct wall solutions that we know are competent and fit for purpose. On this we do not compromise. No short cuts are taken and no concession is made on quality, safety and performance.
Creating large level platforms for industrial estates typically require tall and reliable retaining structures. These wall structures are often required to support the foundations for heavy industrial buildings and associated equipment and storage, as well as heavy vehicle movements. These large, often highly visible walls, need also to aesthetically complement their surrounds, whilst being professionally engineered and utilising reliable quality products and a strong competent backfill. We have completed structures for Australand, Goodman, Bunnings and many other industrial clients.
subdivision

Aesthetics and economy are often the driver for structures required for subdivisional works where walls tend to be lower in height and less heavily loaded, but still form an important and highly visible feature for the local community and residents.

Through our partnership with various proprietary system owners we can offer a range of attractive solutions from sleeper walls, crib walls, large block gravity structures and gabions. These walls are cost efficient, durable and fast to install and again, Retaining Solutions offers a full design, supply, installation and certification service.
SLEEPER WALLS

Retaining Solutions offers a full design, supply, installation and certification service.
Experience
- 10+ years experience with a core team of long term employees
- Large scale mining works
- Large scale transport infrastructure works
- Industrial & commercial
- Subdivision

Services
- Certified professional retaining wall design services
- Internal wall stability design
- Drainage design
- Foundation assessment & design
- Global stability design
- Drafting services
- Preliminary through to construction issue drawings and standard detailing
- Supply retaining wall materials
- Retaining wall construction & associated earthworks
- Plant hire service
- Franna cranes
- Excavators
- Tracked loaders
- Fully mine compliant machinery
- Full project management & site supervision & inspections
- Fully documented installation procedures
- Full quality assurance
- Safety management
- Documented site safety procedures
- Third party assessed management procedures
- Geographical reach