

# CSM Group

CIVIL | STRUCTURAL | MATERIALS HANDLING

"Complete Design and Engineering Solutions"



Capability  
Statement

CSM Group Pty Ltd

## ABOUT CSM GROUP

CSM Group is a premier design and engineering solutions business focusing on civil, structural, and materials handling across Australia. With a commitment to operate with honesty and integrity, and a multi-disciplinary approach to business, our clients can be assured they are being offered a full package of services at the right price.

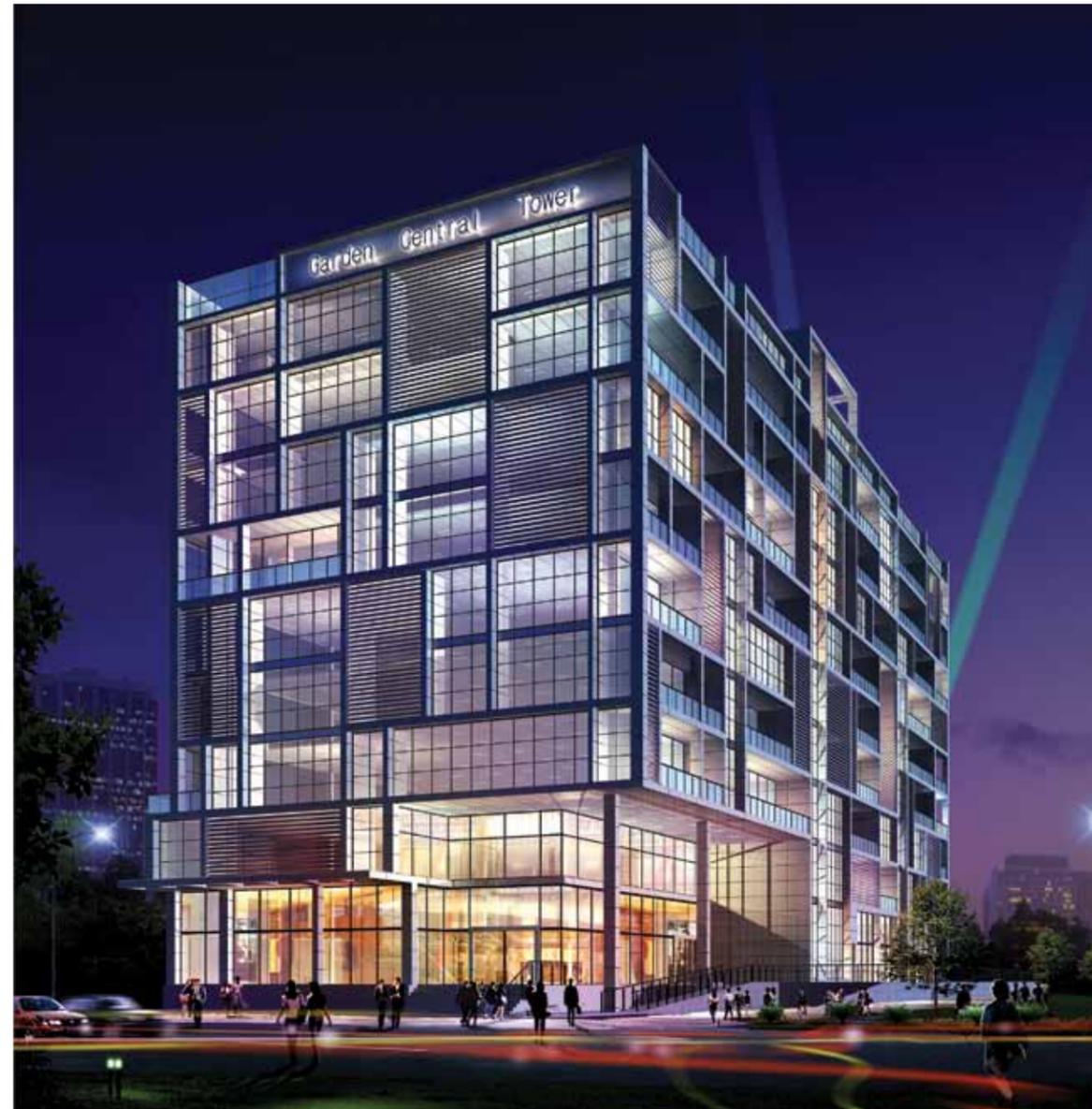
CSM Group undertakes a vast range of design and engineering services, meaning clients only need to make one phone call for all their needs to be met. We offer detailed design solutions, project management services, and construction supervision, offering a collaborative approach utilising all our in-house engineering and design disciplines.

From start to finish, every project is handled in an innovative manner.

Utilising the latest technology and the depth of knowledge of our experienced staff results in cost-effective solutions along the way. Our commitment to you is simple – we will provide exceptional customer service and ethical business practices, resulting in quality and successful outcomes.

### Our Commitment

The CSM Group team is committed to delivering innovative, cost-effective design and engineering solutions. CSM Group is also dedicated to exceptional customer service and ensuring its team always has access to the latest, state-of-the-art computer software to provide our clients with the highest quality designs, including 3D visualisation.



## CSM GROUP AND YOU

CSM Group has the capabilities to ensure your project remains economical and sustainable throughout the entire works. From the very beginning we offer a full package of services that will complement your work, and innovative practices and designs that could save you time and money.

### Philosophy

At CSM Group, our philosophy is simple – we aim not to be the biggest in the industry, but to be respected as an engineering and design consultancy of the highest calibre. We achieve this through experienced and qualified staff, coupled with our extensive in-house resources – including the latest in computer technology – with a focus on quality, and a multidisciplinary environment that fosters increased efficiency and accuracy.

We remain committed to the highest standards of customer service, tailoring our services to each individual client to ensure their needs and expectations are not only consistently met, but exceeded.

We value the relationships we are able to establish with our clients through offering clear, effective communication, best practice environmental management procedures, and optimal occupational health and safety procedures.

### Accreditations and Affiliations

Being a team of highly qualified and experienced professionals, CSM is aware of the importance of being recognised as such by industry bodies. We strive to ensure that not only do we have the most stringent of quality management systems in place, but that these are third-party certified. CSM group is currently accredited to ISO 9001 for our quality management systems through International Management Marketing Systems.

In addition, we have earned our place as Members of the Institute of Engineers Australia, the Concrete Institute of Australia, and the Urban Development Institute of Australia.





## OUR SERVICES – CIVIL

One of CSM’s key assets is its civil design capabilities. We are civil design specialists, providing our clients with exceptional design solutions, project management, and supervision for all civil developments.

These civil developments have included:

- Urban and rural property developments
- Industrial developments
- Commercial developments

Within the civil sector, we are able to offer a wide scope of services for a range of developments. From project management and civil design services, through to stormwater and hydrology advice and planning, and stormwater management and erosion control design, our civil expertise can be tailored to suit any project.

Our wide range of civil services includes:

### Urban Design

All of the civil design and project management services nominated below are provided for when CSM Group designs your development.

- Feasibility studies and preliminary site examinations
- Preparation of D.A and operational works approvals
- Roads and pavement design
- Negotiation with councils
- Cost estimations
- Bulk earthworks and volumes
- Sewerage reticulation design
- Contract administration

- Sewage pump station design
- Water reticulation design
- 3D visualisation of your complete development
- As constructed drawings

### Hydraulic

Our hydraulic services include;

- Overland flow reports and analysis
- Site-based stormwater management plans
- Flood inundation plans
- Flood studies
- Major flow ie, Q50 or Q100 assessments with building floor levels nominated
- Detention basin design and analysis
- Stormwater quantity and quality reports
- Music modelling for water quality reports to best practice
- Sediment basin design
- Bio-retention system design

### Environmental

All of the environmental design services nominated below are provided for when CSM Group integrates its environmental solutions within the approval processes.

- Stormwater quality management plans

- Stormwater quality maintenance manuals
- Erosion and sediment control plans
- Stormwater treatment device design and selection
- Water quality modelling
- Sediment basin design
- Bio-retention swale design
- Vegetation management plans
- Erosion and sediment control plans
- Primary and secondary pollutant control solutions
- Park and sports field design
- Detention basin and wetland design

### Landscape Architecture

Our designers offer design and documentation for the following as per Council requirements:

- Bio-retention basins
- Bio-retention swales
- Street planting
- Parkland design
- Streetscape Plans
- Planting in accordance with CTED principles
- Design in accordance with Council’s landscape manuals.

### Electrical Engineering

Our electrical services provide for all aspects of electrical engineering, including:

- Electrical services for buildings and sites
- HV, LV overhead and underground reticulation
- Street lighting and arterial road lighting
- Subdivisions to Energex standards (SWP47.1 & 47.3)
- Intersection traffic signal and lighting design
- Specialised lighting for indoor and outdoor facilities

- Automatic fire detection and alarm systems
- Emergency warning and intercommunication systems
- Public address and MATV systems
- Communications - general, health and aged care
- Standby power generation
- Uninterruptible power supplies and line conditioning equipment
- Lightning and surge protection
- Security systems including CCTV, intruder alarm and duress alarm systems

### Construction Project Management

Our construction project management services include:

- Bulk excavation
- Roadwork construction
- Flexible and rigid pavements
- Sewer and water reticulation
- Bio-retention basins
- Car parks
- Complete construction and project management of land developments.

## STRUCTURAL

CSM Group is a specialist structural design business, providing our clients with exceptional design, project management, and supervision for all structural projects.

These skills extend across a range of projects, including urban developments (such as units and townhouses, shopping centres and resorts), commercial developments, industrial developments, and mining and materials handling projects.

The services we utilise in order to successfully complete these projects include:

- Project Management: negotiation with councils and other statutory bodies, site examinations, cost estimation, and tender preparation, evaluation and selection.
- Structural design: expertise in medium to high-rise residential apartments, commercial buildings, reinforced concrete structures and retaining walls, concrete slab and footing

design, steel portal-framed industrial buildings, buttress piling, bridge design, and tilt-up concrete structures.

CSM Group’s expertise in structural engineering extends to the following projects:

### Residential Developments

- Multi unit
- Residential / domestic
- High rise
- Aged care
- Underpinning
- Retaining walls

### Commercial

Government buildings, schools, community facilities

- Shopping centre developments

- Office buildings,
- Small- to-medium retail facilities
- Medical centres

### Industrial

- Warehouses
- Production facilities
- Manufacturing plants
- Batch plants
- Mining enclosures

### Plant structures

- Conveyor trestles and trusses
- Footings for machinery and structures
- Pipe racks
- Batch plants
- Mining enclosures
- Landmark Structural Projects





## MATERIALS HANDLING

Utilising CSM Group's experience and knowledge in the fields of civil and structural engineering has allowed the Company to offer services in the mining and materials handling sector.

The business has expanded into this area in a strategic manner, allowing its exceptional design, project management and supervision skills to be applied to projects for both greenfield and brownfield sites.

We provide civil, structural and mechanical design services for mineral processing plants, concrete batch plants, sand mining operations, and materials recycling plants within the mining industry.

CSM Group can provide civil, structural and mechanical design services within the following mining and materials handling industries;

### Industries

- Mineral processing plants
- Concrete batch plants
- Sand mining operations
- Recycling plants

### Civil Design

- Haul road and pavement design
- Earthworks design for large hardstand areas
- Tailings dams and containment ponds
- Potable and non potable water reticulation
- 3D visualisation of complete civil works
- Bulk earthworks and volumes
- Sewerage and pump station design
- Materials handling layouts
- Stormwater drainage and culvert design

### Structural Design

- Steelwork and reinforced concrete structures
- Transfer buildings
- Building enclosures for materials

- Conveyor supports and concrete footings
- Walkways and platforms

### Mechanical Design

- Conveyors
- Feeds and chutes
- Drive calculations for conveyors
- Bearing, pulley, belt, sprocket, chain, motor and gearbox design
- Pneumatic and hydraulic schematics
- Pump design

## NEW PRODUCTS

### STRUCTURAL

#### Buttress Piling Retaining Wall System

This system was designed and patented by CSM Group's senior structural engineer Edgar Agda to overcome a situation when the adjacent neighbouring land owner does not consent to rock or soil nail anchoring systems being installed underneath their property. This system is used as the bulk excavation retaining wall where deep underground basements are required in a building.

Buttress piling is a system whereby a piered wall is restrained by inserting additional piers perpendicular to the wall (in towards the building). That is, away from the adjacent lot boundary in order to restrain the main wall from sliding, overturning and deflecting due to soil, pore pressure and other applied loads.

The retaining wall system relies on the bearing capacity of material and cohesion between the piers in order to enable three-dimensional restraining actions to occur.

This system has already been installed in 23 building sites. Developers could

proceed with their projects even though they didn't have the adjacent land owners' consent.

The advantages of this unique system include:

- Proprietary system concrete panel wall construction system that works via an internal propping system (ie, buttress piling, without external rock anchoring)
- No authorisations required from adjacent landowners
- Less risk involved in construction
- Shorter construction duration
- Cheaper construction costs

This particular buttress piling system is applicable for clay/sandy soil stratas, however where the site is mostly rock we utilise a system known as 'buttressframing'.

#### Buttress Framing System

Buttress framing is similar in principle to the buttress piling except that instead of extra concrete piles inside the perimeter wall, a steel framing system supports the external loads from the inside. This system is utilised in rock stratas, again negating the requirement for the land owners' consent.

## ENVIRONMENTAL

At CSM Group, we know that civil, structural, and mining/materials handling projects go hand-in-hand with environmental management solutions. That's why we offer cost-effective, best practice environmental management services for all our clients for projects ranging from urban, commercial, and industrial developments, through to materials handling operations.



We can provide our clients with a range of environmental management services during the development stage, including the compilation of vegetation management, and erosion and sediment control plans, along with other services such as water quality monitoring, and design services.

Environmental solutions can also involve the use of a range of products. CSM Group is cognisant of the best and most innovative product solutions, such as silt fencing, turf reinforced mats, bio retention swale drains, hydromulching, and many others that will be tailored to the requirements of each unique project.

## OUR TEAM

CSM Group comprises a team of talented individuals, each one of them an expert in the fields of civil and structural engineering, and mining and materials handling. It is this combined expertise that contributes to the overall success of a project.

With such extensive experience between them, these senior members of CSM Group also have an enviable list of contacts around Australia that provides the Company with the ability to offer services to clients throughout the country.

### **Bruce Delahunty, Engineering Manager/ Director (MIE Aust. [Civil/Struct], Cert. Mech Eng.)**

Bruce has over 30 years experience around Australia in the civil, structural, and materials handling/mining sectors. During this time he has developed unparalleled experience that has ultimately lead to his professional success, and that of CSM Group. Some of the projects Bruce has been involved in include over 40 subdivisions, mine layout design for Lihir Gold, and numerous residential developments, reinforced concrete buildings, and mining materials handling systems and plant design, among many others.

### **Edgar Agda, Senior Structural Engineer (BEng [Civil/Structural], MEngSt [Geotechnical], MEngSc [Structural/Foundation])**

Edgar has over 25 years experience within the civil and structural engineering industry. Having worked on a variety of complex projects both in Australia and abroad, Edgar has extensive knowledge of a range of techniques and legislative requirements. His strengths lie in the pursuit of innovative design concepts that result in economical and sustainable outcomes for clients.

### **Michael Steer, Senior Civil Engineer (MIE Aust., BEng [Civil/Env])**

Michael has over 30 years experience within the civil and structural engineering fields. His strengths include planning, feasibility analysis, design, coordination, contract documentation, supervision, project management, and contracts administration. Michael is a Member of the Urban Development Industry of Australia, and a qualified Internal Auditor to ISO 9001.

To find out more about how CSM Group can assist with your project, or to obtain a quote, please contact us.

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## WHAT OUR CLIENTS SAY

"CSM Group have provided us with a service second to none; their project updates kept us in the picture at all times."

### **Brad Smith- General Manager - BAP Developments**

"CSM Group's innovative civil design solutions created an extra lot for our development worth \$280k and their redesign saved us \$200k in construction costs, thus saving us \$480k! Well done CSM Group. I have no hesitation in recommending their services to any developer, civil or structural."

### **Peter Peeters – Managing Director - BAP Developments**

"CSM Group's structural team have overcome all the challenges we presented them with and scored highly in their innovative structural solutions. Their documentation was all class."

### **Cai Xue- Director - Horizon Growth**

"CSM Group overcame court challenges and a difficult local council to get our development back on track and with a \$100k saving by redesigning other civil consultants' DA conceptual plans."

### **Dr Stewart Hunter- Director - Hunter Constructions**

"CSM Group provided me a solution to my development when other consultants couldn't. Thanks CSM Group."

### **Ernie Kostadis - Director - Kostadis Developments**

"CSM Group got me out of trouble after our other civil consultant went AWOL. A speedy resolution"

### **Chris Walters - Director - ARI Finance**

"CSM Group have honesty and integrity and remarkable solutions. They got my developments back on track and saved us on construction costs."

### **Vinh Truong - Director – Tiviity Gifts**

