



Company profile



erbas™ has been established over 20 years and employs approximately 50 staff across multiple offices in Australia and abroad. Everything we do is focused on successful outcomes for our clients. It has never been our goal to be the biggest. But we are committed to being the best and that makes all the difference. Our fields of consulting include the building engineering fields of Mechanical, Electrical & Communications, Security, AV, Lighting, Hydraulic, Stormwater, Fire Protection, Sustainability and Lift systems. erbas™ SUSTAIN is a subsidiary brand of erbas™. Through our ESD team, we strive to encompass good sustainability principles in all our projects.

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Foreword

At erbas™, we pride ourselves on making service our priority.

You can rely on us to respond promptly to your requests.

We have the resources and expertise to deliver projects at short notice.

As a team we all share the same passion for exceeding our clients' expectations and this inspires each of us to go the extra mile every day. Our purpose is to work in partnership with our clients to realise their ideas and show them what is possible. Our structure allows us to successfully complete an average of 300 projects every year ranging from reports and small fitouts to large hospitals and correctional centres.

It is with great pride that we boast completion of over 8,000 projects which includes:

- 1,000+ Schools
- 300+ TAFEs
- 100+ Tertiary
- 50+ Hospitals
- 40+ Train Stations
- 30+ Aged Care
- 50+ Courthouse and Police Stations
- Hundreds of high density residential, government and corporate office fitouts
- High end hotels, retail and hospitality
- Industrial
- Stadiums, Pavilions and Recreation
- Correctional Centres, including Australia's largest new prison

We couldn't achieve it without our great people, whom are our family and we all look forward to collaborating and helping you with your next project.

Ken Gurcan Erbas
Managing Director



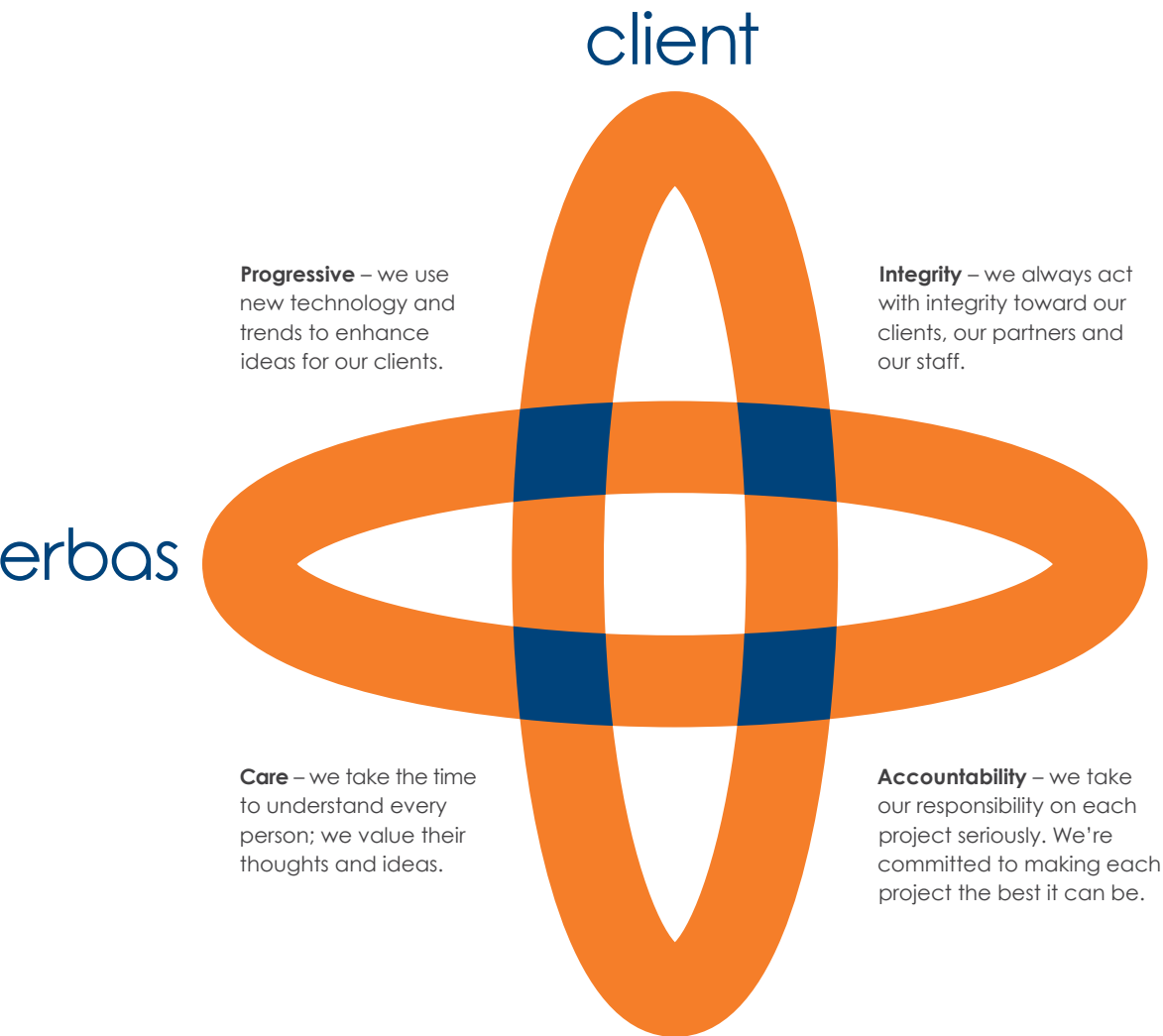
Brand values

The brand mark features two intersecting orange rings, representing our working philosophy with our clients. We believe that 'We're in it together', this means that we're not happy until our clients are. Every project is important to us and for 20 years we've been focused on growing our business through this philosophy of shared responsibility.

The erbas™ brandmark represents us now and in to the future. Whilst our philosophy hasn't changed that much, the way we work has. We're more nimble, flexible and adaptable, but we're still collaborative, diligent and experienced.

Our brand identity is a reflection of our brand values; Integrity, Progressive, Care and Accountability.

We're in it together



What sets erbas™ apart?

erbas™ offers engineers that both consult and engineer. We aim to provide an enjoyable, collaborative and seamless integration into your design and construction teams.

- erbas™ is commissioned to complete approximately 300 projects every year
- We have been established in Australia for over 20 years
- We are a multi-disciplinary company offering all building services including Mechanical, Electrical, Hydraulic, Lift, Fire Protection and Sustainability
- We have strong experience across a broad range of sectors, allowing us to apply knowledge and best practice to projects that might otherwise follow the status quo
- We have been ISO9001 certified for over 15 years
- We are committed to working closely with our clients and project teams to deliver projects on time and on budget
- We have been used exclusively by many clients

Our latest projects include:

- Grafton Correctional Centre, NSW (\$706 M)
- Orange Hospital, NSW (\$230 M)
- Barangaroo Headland and Cultural Centre, NSW (\$110 M)
- Australian Hearing Hub, NSW (\$140 M)
- UNSW Kensington Colleges, NSW (\$100 M)
- IKEA, Marsden Park, NSW (\$55 M)
- 'Hunter' Commercial and Holiday Inn Hotel, VIC (\$50 M)
- QUT Sportsfield and car park, QLD (\$36 M)
- TLC Aged Care Mordialloc VIC
- North Melbourne Football Club AFLW and VFL Facilities and Arden Street Oval Lighting, VIC
- Kingaroy Police Station, QLD
- Brighton Grammar School, St. Andrews Exchange, VIC



Our aim is to be an asset to the entire consultant and building team. We collaborate closely with the Client and Design team to understand the needs of key stakeholders and deliver documentation and advice that brings value to the project and the organisation. Our experience in delivering a range of projects across a broad range of sectors and budgets means we can help you from fit-for-purpose to cutting-edge design.

Methodology

A typical project approach

Early engagement with the design team and client helps us to discuss adequate spatial requirements for services to be integrated into the architectural and structural designs and our knowledge of the operational aspects of buildings can be used by the design team to further enhance the environmentally sustainable design aspects of the building and reduce infrastructure, operational costs and carbon footprints of spaces.

The erbas™ project leader will be our main point of contact for the project at design team, client and site meetings. Our project leaders are skilled communicators and have design experience across each discipline, meaning queries that arise during meetings can generally be discussed and resolved during the meeting without the need for in-house consulting after the conclusion of a meeting. We believe this will assist our Clients to meet and potentially reduce their design and construction programs.



In order to make best use of the design program, we would aim to undertake a building services condition inspection at our earliest possible convenience and then make recommendations for:

- Suitability for reuse; and/or
- Engagement of a contractor to undertake intrusive inspections and plant capacity and condition validation reporting.

Our design team members, through past project experience or through discussions with our team, will obtain an appreciation of your end user needs and we will produce a design that:

- Meets the budget – we will work with the Quantity Surveyor to provide accurate estimates of our opinion of probable costs;
- Is fit for purpose;
- Where applicable, makes use of existing plant and equipment where suitable for reuse and meets the performance criteria; and
- Inherently incorporates good ESD practices.

Where required, we will draw on the experience of our interstate colleagues and implement lessons learned from our other national and international projects.

Where we are invited to assess tenders, erbas™ will make comment on the qualitative and quantitative merits of the building services tender submissions for the consideration of the builder and/or design team and client. We will carefully note exclusions and conformance to the tender documents.

Where we are appointed for Construction Assistance during the build, we aim to become a useful point of reference to the winning contractor and assist them in realising the design. We work with their sub-contractors' on any queries and can be appointed to inspect work regularly for installation compliance, defect rectification and closing out of the contract works and defects liability period and/or post occupancy evaluation. All the best design intent in the world mean very little if the system is not correctly commissioned or being operated; we can help the client analyse the ongoing use of the building and assist with recommendations for seasonal recommissioning of plant and the like.

We want to be the consultants you can rely on to build a seamless, ongoing relationship to help shape the future of the spaces in which the end users operate.

Service offerings

erbas™ offers you consultants. We give you people with the technical know how to design or help guide built environments that are fit-for-purpose, efficient, environmentally sound and within budget. We give you help when you need it and we give you more than yes or no answers. We help you to lift the standard in design. We have an appreciation for construction processes, programmes, leases, rentable areas and running costs. We get it.

Our Capabilities and Services include:

- Mechanical
- Electrical
- Building Information Modelling
- Hydraulic
- Transportation
- Fire Protection
- Environmentally Sustainable Design via erbas™ SUSTAIN



Mechanical

erbas™ started as a solely mechanical consulting firm and continues to laud the discipline as a key strength. From apartments and schools to hospitals, correctional centres and universities, we have the mechanical design services covered.

Heating and Cooling Systems:

- Air Conditioning
- Heating
- Building Management Systems and Controls
- Mechanical Ventilation
- Natural Ventilation
- Mixed Mode HVAC Systems
- Under Floor Air Distribution and Displacement Ventilation
- District Cooling Systems and Central Plant Systems
- Life Cycle Cost Analysis

Specialised Mechanical Systems:

- Smoke Hazard Management Controls Systems
- Industrial Ventilation
- Dust and Fume Extraction Systems
- Thermal Storage
- Medical and Specialist Gases
- Compressed Air Systems
- Laboratory Gas Distribution Systems
- Water Treatment
- Kitchen Extract Canopies and Treatment





Electrical

The Electrical Services team at erbas™ has a balance of youth and experience. We provide individual design solutions that respond to our client's particular needs. Not only do our consultants take pride in the aesthetic outcomes of the built environment, they care about compliance and practicality.

Our designs start with a shared assessment of the client's brief. We don't start any design with any preconceived notions. We explore each design in an open and collaborative environment and understand the importance of meeting face to face on a regular basis. We use graphics to present design ideas and verify performance and compliance using software modelling. We investigate new technologies and carry out due diligence, life cycle analysis and return on investment. We incorporate sustainable design principles in all our designs and work with ESD engineers to meet targets and objectives. We aim to develop sustainable, innovative and creative design solutions and provide a competitive advantage by assigning our best designers on each project throughout design and construction.

We specialise in the following areas:

- Generators
- Switchboards
- Cabling
- General Power
- Photovoltaic Systems
- Lightning Protection Systems
- Automatic Sub-metering Systems
- Uninterruptable Power Supplies
- General Lighting
- External and Car Park Lighting
- Feature and Specialist Lighting
- Emergency and Exit Lighting
- Automatic Lighting Control Systems
- Structured Cabling Systems
- Master Antenna Television (MATV) systems
- Background Music and Public Address (PA) systems
- Audio Visual (AV) Systems
- Hearing Augmentation Systems
- Nurse Call Systems
- Patient Treatment Wiring
- Security and Access Control Systems
- Closed circuit television (CCTV) systems
- Intercom systems

Building Information Modelling

Building Information Modelling (BIM) is the process whereby information is added to architectural, structural and building services documentation over and above that which has been traditionally associated with standard 2D documentation. erbas™ is currently BIM LOD300 ready.

As an important part of the transformation of the building services industry over the last few years, erbas™ collaborates with architects, contractors and, most importantly, with their clients.

Although BIM is generally considered to constitute the production of 3D documentation, it can also incorporate 4D (time), 5D (cost) and 6D (facility management). Each aspect can be built into the deliverable to give the client a complete and comprehensive model which will facilitate the design, construction and ongoing management of their facility.

Producing a project that satisfies the requirements of BIM involves the production of a fully co-ordinated model of the project which will incorporate aspects of the building fabric (by the architect), the structural components (by the structural consultant) and the building services themselves (by consultants such as erbas™). This ensures that, at each stage of the design process, every aspect of the model is fully co-ordinated in real time.

This results in higher quality documentation, better communication between all parties and a realistic presentation to the client. Walk-throughs of the virtual building will come to be a standard method of presentation to indicate the design intent and will facilitate risk management, analysis and approval. The fact that a design can be seen to have been fully co-ordinated before construction work even begins also results in a huge reduction in on site delays and variations with a considerable consequential cost saving to the client.

The market has spoken and erbas™ has invested heavily in the necessary software, hardware, personnel and ongoing training required to give us the ability to pass on the benefits of BIM to our clients. We are committed to ensuring that our company achieves and maintains a leading role in providing such a service.



Transportation

Vertical transportation is a vital part of the building services in multi-story buildings and includes lifts or elevators, escalators, and hoists. All of these ensure that the building occupants are taken to their required destination in an efficient and timely manner.

The size, speed and capacity of lifts required to serve a building are often established by carrying out a lift traffic analysis. This determines the handling capacity (percentage of the building population that can be transported in a given time) and waiting times (time for a lift to arrive when a call button is pressed).

The interior finishes of a lift are also important during design. We provide our Clients with options for lift car finishes that are available from the lift suppliers, from standard packages to fully customised elements.

By bringing all of the above features together, we work with our clients to provide suitable vertical transportation options that will service the building in a cost effective and efficient manner.

- Lifts and Elevators
- Disabled Hoists
- Lift Traffic Analysis
- Pneumatic Tube

Hydraulic

erbas™ has both experience and success in providing hydraulic design across a wide range of Building Services Sectors including Commercial and Residential, Industrial, Hospital, Corrective Services, Educational and Aged Care.

Our team is highly experienced in all aspects of Hydraulic Services including:

- External and Internal Sanitary Plumbing and Drainage Systems
- Trade Waste Drainage Systems
- Stormwater and Subsoil Drainage Systems
- Roof Drainage and Downpipe Systems
- Sanitaryware, Tapware and Fixture Selection
- Natural Gas Reticulation System
- Domestic Hot, Cold and Warm Water Reticulation
- Non Potable Water Reticulation
- Life Cycle Cost Analysis
- Infrastructure Design

erbas™ is also highly experienced in specialised Hydraulic Services including:

- Rainwater Harvesting Retention Systems
- Reverse Osmosis Water Reticulation (RO Water)
- Clean Water Reticulation Systems
- Analytical Grade Water
- Laboratory Gases
- Medical Gases
- Industrial Gases
- Solar and Hydronic Hot Water Reticulations Systems
- Effluent Waste Disposal Systems including Septic Systems

Our experience and expertise also includes a clear and concise understanding of current regulatory codes and authority requirements.

The benefit of having both depth and experience within our Hydraulic Design team empowers erbas™ to continually meet client expectations, providing sound, environmentally conscious and cost effective advice and input throughout all projects.



Fire Protection

Our Fire Protection engineers will provide designs that meet the 'deemed-to-satisfy' provisions of the building code and local brigade and authority requirements. Where a unique building or project cost saving is required, we can work with the design team and appointed fire engineers and certifiers to design performance-based solutions that meet fire risk and safety requirements.

The service offering of the fire protection engineering team includes:

- Fire Hydrants
- Fire Boosters
- Fire Tanks and Pumps
- Fire Sprinkler Systems
- Drenchers
- Combined Hydrant and Drencher Systems
- Fire Hose Reels
- Fire Extinguishers
- Fire Suppression Systems
- Fire Detection including VESDA
- Fire Control Rooms
- Fire alarms
- Automatic Fire Detection Systems
- Building Occupant Warning Systems (BOWS)
- Emergency Warning and Intercommunication System (EWIS)

Civil Engineering Stormwater Drainage

Supplementing the INTERNAL stormwater design covered by our Hydraulic Services team (including the downpipe network for gutters, rainheads, sumps, emergency overflows, planter box drainage, balcony outlets and terrace drains), erbas™ can also provide EXTERNAL stormwater drainage design to address local Council Development Application (DA) requirements including on-site detention (OSD) storage, rainwater storage, stormwater quality improvement devices (SQIDs), Water Sensitive Urban Design (WSUD) measures, subsoil & pump systems, erosion & sediment control plans, and a design certificate provided by a Chartered Professional Engineer (CPEng) listed on the National Engineering Register (NER) of Engineers Australia.

Our team is highly experienced in all aspects of Civil Engineering Stormwater Drainage Services including:

- On-Site Detention (OSD)
- Rainwater
- Stormwater Quality Improvement Devices (SQIDs)
- Water Sensitive Urban Design (WSUD)
- External Drainage in Conjunction with Civil Engineering Structures



The erbas™ SUSTAIN team has the expertise to provide a range of services including:

- **Green Star**
- **WELL**
- **BESS**
- **BEEC Certification for CBD**
- **NCC Section J assessments**
- **Corporate sustainability advisory & reporting**
- **Town planning compliance assessments**
- **NABERS**
- **GRESB**
- **EnviroDevelopment**
- **Thermal, energy, daylight modelling**
- **Passive & low energy design**
- **CFD**
- **BASIX**
- **NatHERS**
- **Environmental performance monitoring & reporting**

erbas™ SUSTAIN is an integral component of erbas™ and instils sustainability concepts and efficient design into engineering projects. We understand the importance of interdisciplinary coordination and communication with stakeholders to achieve sustainability objectives. In addition to optimising environmental performance, we seek to maximise the value of our buildings for end users and the community at large. With increasing concern and emphasis on the consequences of climate change, erbas™ SUSTAIN strives to be at the forefront of providing solutions in meeting stringent and challenging goals.

We are certified with ISO14001:2015 Environmental Management System.

Sustainable design

At erbas™ SUSTAIN, we believe in having a social and environmental duty to our communities by:

- Promoting solutions to reduce energy consumption, water consumption, greenhouse gas emissions, and waste generation;
- Advocating the use of renewables as alternative energy sources;
- Educating and increasing awareness of ESD issues with clients and the wider design team;
- Designing practical and feasible solutions;
- Optimising designs by understanding client objectives and site constraints.

Health and wellbeing

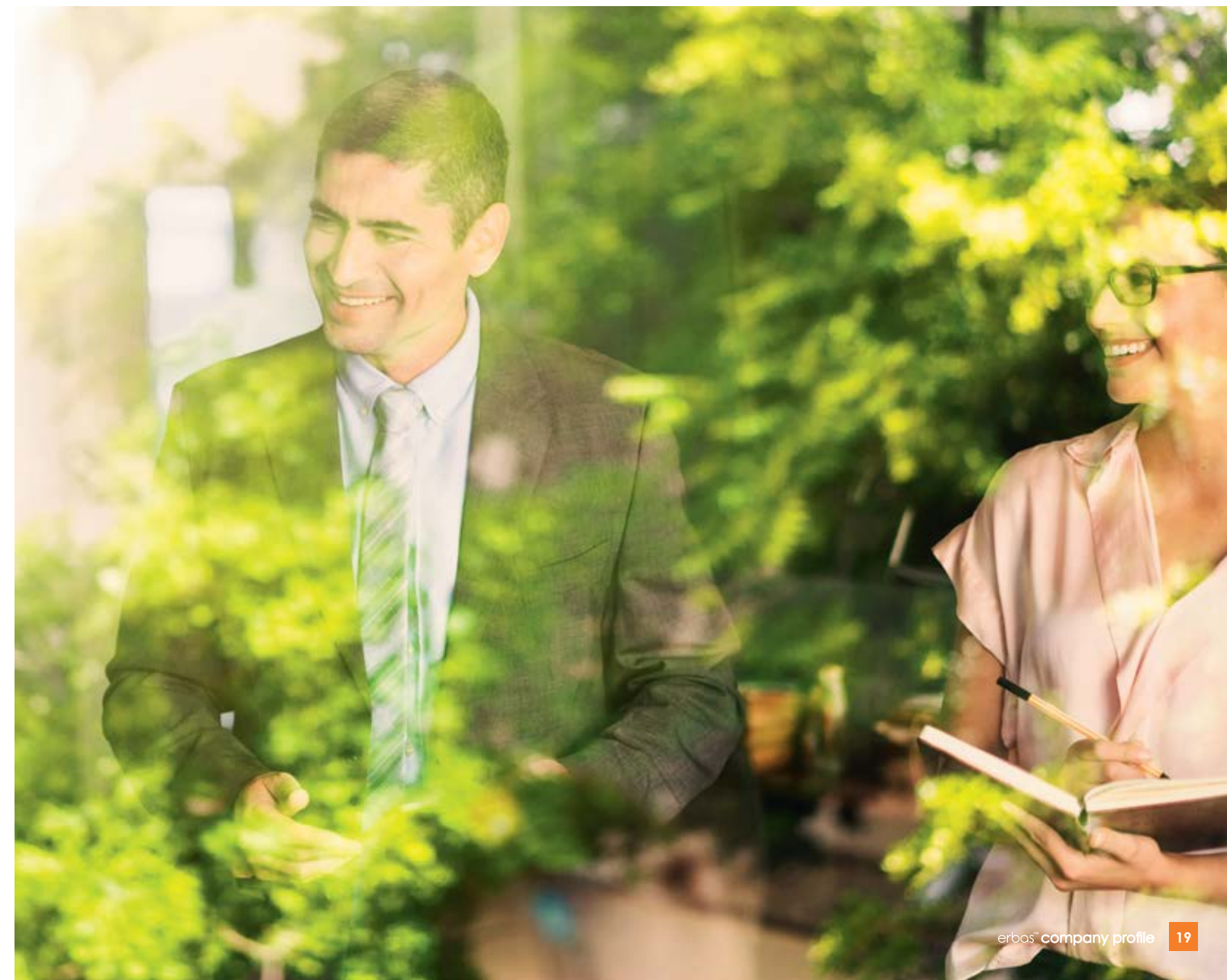
With an increasing focus on health and wellbeing of end users, erbas™ SUSTAIN incorporates design elements to promote happiness, improve productivity, and enhance health benefits of building occupants. WELL is an international tool increasingly adopted by the industry. We provide advice from concept to design and through to construction on aspects of thermal comfort, lighting comfort, materials, acoustic comfort, healthy eating, etc., to achieve a WELL certification.

Operational performance

Buildings should be regularly monitored to ensure optimal operations. Whether for NABERS or corporate sustainability reporting, erbas™ SUSTAIN can analyse the performance of assets and portfolios by benchmarking operational data. Through this process, we identify opportunities for improvement of reducing consumption.

Recent Sustainability Project Experience

- **Goodyear Warehouse and Offices, Eastern Creek, NSW** - Green Star
- **Ingram Micro Warehouse and Office, Eastern Creek, NSW** - Green Star
- **479 Bourke Street, Surry Hills, NSW** - NABERS
- **414 Elizabeth Street, Surry Hills, NSW** - NABERS
- **145 Eagle Street, Brisbane, QLD** - NABERS
- **Grafton Correctional Centre, NSW** - Energy modelling
- **Cessnock Correctional Centre, NSW** - Energy modelling
- **TLC Aged Care, Mordialloc, VIC** - Sustainability Management Plan, Energy modelling
- **Cbus Property** - Global Real Estate Sustainability Benchmark (GRESB)
- **Rhodes Community Hub** - Green Star
- **Frasers Property** - Green Star
- **McKillop House** - Sustainability Management Plan, Energy modelling
- **Belgravia Leisure** - Learn to Swim - Energy modelling





The multi-disciplinary services team at erbas™ aims to utilise our broad engineering skill sets in juxtaposition with current technologies to provide a holistic, integrated and sustainable building services design.

Project expertise



Buildings

- Offices
- Fit-outs
- Residential
- Leisure & Entertainment
- Sports Facilities
- Hotels
- Religious Buildings



Health

- Hospitals
- Research Facilities & Laboratories
- Aged Care
- Medical Centres



Education

- Schools
- TAFE
- Universities
- Child Care



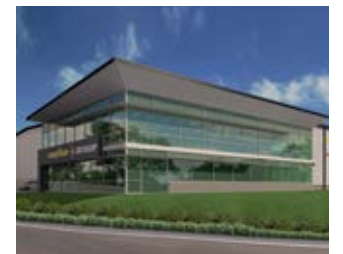
Government

- Justice Facilities & Courthouses
- Correctional Facilities
- Public Buildings
- Fire & Police Stations
- Community Centres & Libraries



Infrastructure

- Train Stations
- Substations



Industrial

- Warehouses
- Factories
- Pharmaceutical



Retail

- Shopping Centres
- Pools
- Casinos



Modelling

- REVIT
- BIM



Sustainability

- Green Star
- NABERS
- WELL
- GRESB
- Modelling
- Energy monitoring

A low-angle, upward-looking photograph of several modern skyscrapers with glass facades, reaching towards a clear blue sky. The perspective creates a sense of height and architectural scale. A street light is visible in the upper left corner.

Our projects

erbas™ does not have a specific sector for which we are famous. It is our broad experience over numerous sectors that gives us an edge.

We apply the knowledge and lessons learnt from niche sectors and apply them to sectors to add value and create unique, new ideas to buildings that have previously just followed the status quo.

Our project experience is not limited. For over twenty years, Australia and abroad, we have been commissioned to consult and design on the simple to complex, the budget conscious to the blue sky.

Buildings – Residential



Panorama, Crows Nest NSW

'Panorama' is one of the tallest residential towers in Crows Nest, consisting of three buildings, with bulk of the 209 apartments in the 17 level tower. The upper 12 floors having multi-directional views. Podium level provides retail and commercial space.

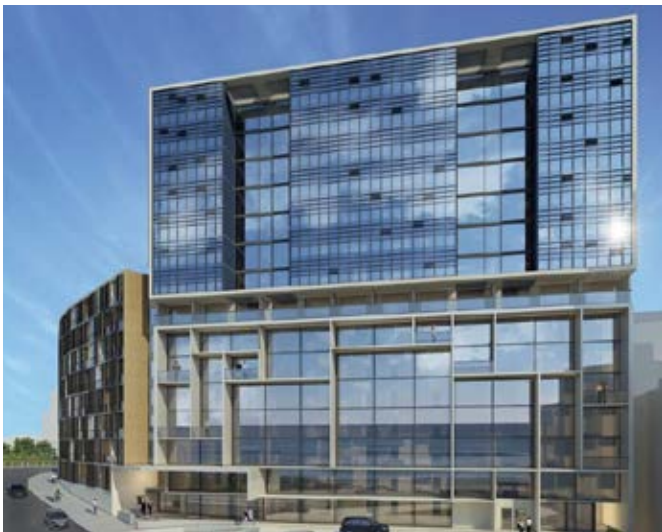
Construction value: \$55 million



Australia Towers, Homebush NSW

Located at Sydney's Olympic Park, stages 2 and 3 consists of 2 high rise 'elliptical' residential towers (24 and 29 levels respectively) providing 588 apartment units in total, common 4 level basement and car parking for over 806 cars and 245 bicycles. A separate podium level consists of retail, commercial, community centres and other facilities/rooms.

Construction value: \$200 million



Arena Apartments, Newcastle NSW

The 15 storey Esplanade development comprises a 100 room hotel between the lower ground floor and level 5, 95 residential apartments from Level 6 to 14, plus foyer, restaurant, bar and function spaces.

Adjacent is an 8 storey mid-rise building comprising 55 residential apartments. Both towers share a 4 level basement car park.

erbas™ provided mechanical, electrical, fire, hydraulic and lift services.

Construction value: \$61.7 million



Harbour Mill, Pyrmont NSW

This mixed-use development repurposes the former Edwin Davey & Sons flour mill in Pyrmont to 136 new apartments, naturally ventilated communal atrium, ground floor café and a communal gym.

Construction value: \$100 million



Harold Park, NSW

This large residential development is located some 2.5km from the Sydney CBD at Harold Park. Precinct 2 comprises 188 units that form part of a large residential development carried out by Mirvac, creating a green corridor connecting to Jubilee, Federation and Bicentennial Parks and the Sydney Harbour Foreshore.

Construction value: \$65 million



Frederick Street, Doncaster Apartments

Designed by Clarke Hopkins Clarke, this highly sought after Doncaster address boasts over 40 boutique residences and two levels of basement carparking. erbas™ provided the engineering services design for all disciplines.

Leisure and Recreation



QUT Sportsfield and Car Park, Kelvin Grove QLD

Queensland University of Technology (QUT) was the end client for a multi-storey sportsfield and car park to accommodate 800 cars and a sportsfield at the Kelvin Grove Campus. Two levels of car parking are below the full extent of a new sportsfield. The stadium features a FIFA accredited football field, touch football fields and a link bridge to QUT's Kelvin Grove campus.

Construction value: \$36 million



Des Renford Leisure Centre, NSW

The Des Renford Leisure Centre (DRLC) is an award-winning leisure facility located in Heffron Park, Maroubra. It is the only non-ocean public swimming pool in Randwick City and it is owned and operated by Randwick City Council. The facility includes a gym, crèche, 50 m outdoor Olympic pool, 25 m indoor competition pool, 25 m indoor program/training pool, outdoor wading and toddlers' pools, a kiosk/café and car parking. The project was completed in 2012.

Construction value: \$6 million



Sports Pavilions and Halls

erbas™ has designed numerous sporting facilities including:

- QUT Sportsfield, QLD \$36m
- Brighton Grammar Annandale Pavilion, VIC
- University of New England Indoor Recreation Centre, NSW
- Whitlam Recreation Centre, Bondi, NSW
- Tom Wills Oval, Sydney Olympic Park, NSW
- Cliff Sambell Pavilion, Parkdale, VIC
- GH Soppett Pavilion, Mentone, VIC
- Monbulk Pavilion, Monbulk, VIC
- Colman Park Pavilion, Warrandyte South, VIC
- Kings Park Pavilion, Seymour, VIC
- Ocean Grove Primary School Hall, VIC
- Carnegie Primary School Sports Hall, VIC
- Anglesea Surf Life Saving Club, Anglesea, VIC



Sydney Aquarium, Jurassic Seas NSW

erbas™ is not only creating fantastic environments for people, but also for amazing creatures of the world, like penguins and platypus. We are proud to be the services engineers for Project Jurassic Seas at Sydney Aquarium and worked closely with Project Managers Nix Anderson and Alastair Macdonald Architects.

Construction value: \$4 million



Bexley Aquatic Centre, Rockdale NSW

erbas™ provided design services at the Bexley Aquatic Centre for Rockdale Council. Facilities include a health club and group fitness room, indoor 25 m pool, outdoor 50 m pool with covered grandstand, children's splash pad water feature area, cafe and community room / crèche.

Construction value: \$31 million



North Melbourne Football Club AFL Facilities Extension, VIC

North Melbourne Football Club, in conjunction with the AFL, Melbourne City Council and Victorian State Government, are expanding the North Melbourne Recreation Centre to accommodate the Kangaroos' new 2019 AFLW women's team and 2018 VFL men's team.

The development includes new locker and change facilities, commercial kitchen, football department offices, lecture theatre, coaches boxes and other training facilities.

New oval lighting and scoreboards form part of the development, in which erbas™ has been appointed to provide engineering design services.

Construction value: \$7 million

Hotels



Hilton Doubletree, Flinders Street Melbourne, VIC

erbas™ was appointed to facilitate the demolition scope, co-ordination of services, new building services design and reticulation and construction phase support for the expansion of new rooms on additional levels to the existing building. Chroma Group completed the construction in May 2019. erbas™ collaborated with iWolff, Woods Bagot and TTW on the project.



Hunter Commercial Building and Holiday Inn, Werribee, VIC

erbas™ has been appointed to provide the building services design package for the high grade commercial building. The building comprises carparking, education offices, Wyndham City Council offices, warm shell commercial offices and four levels of IHG Group Holiday Inn Hotel, complete with 150 rooms, conference centre, bar and cafe. Retail outlets situated at street level activate the local street façades. Building works are slated for completion 2019.

Construction value: \$50 million



Park Hyatt, Circular Quay, NSW

erbas™ provided design services for the refurbishment of Sydney's most exclusive hotel. Overlooking Circular Quay, at the time of building the Park Hyatt commanded the highest average room rate in Australia. Major works were undertaken with the creation of 3 new rooftop suites, a new pool, upgrade of all guest rooms including joinery and fittings, as well as front of house, dining areas and porte-cochere.

Aged Care



Aged Care Project, VIC

erbas™ is the design and ESD engineer for a cutting edge facility due to open 2021. When completed, the facility will boast the latest in urban integrated care, complete with over 120 new beds, specialised dementia care, childcare, medical clinics, cafés and community health. This is sure to be the new standard in aged care.

Construction value: \$30 – 60 million



Anglican Retirement Village, Woollooware Shores, NSW

Situated on picturesque Woollooware Bay in Sydney's Sutherland Shire, Woollooware Shores offers premium retirement living amidst a vibrant, friendly community.

Comprising 228 dwellings within eight four-storey residential buildings, the one, two and three-bedroom architect-designed apartments, Community Wellness and Community Centre with associated infrastructure and landscaping.

Construction value: \$45 million



Opal Aged Care, Kawana Waters, QLD

This project is located at Kawana Waters and proudly owned by OPAL Aged Care Services.

This 5-star facility consists of 152 beds over 5 levels, including permanent, palliative, despite and dementia specific care. It includes hairdressing salon, café, large communal living areas, dining rooms and outdoor gardens.

Construction value: \$25 million

Health



Orange Base Hospital, Orange, NSW

This major redevelopment accommodates a multi-storey general hospital building accommodating over 400 patient beds, a roof-top helipad, a new acute mental health facility building and new secure mental health unit building. It also includes refurbishment of existing buildings and allows parking for over 1,000 cars on the site. This project was completed for NSW Health Infrastructure.

erbas™ was appointed by Hansen Yunken to provide the HVAC design review, validation and value engineering for the project.

Construction value: \$260 million +



Hornsby Hospital

New hospital facility has been provided at Hornsby Sydney NSW to provide health services to the community.

The new hospital is offering a new emergency department, paediatrics and a maternity wing. This project was the first major development on the site for many years and is the cornerstone of a major rework of the entire campus. This project was completed for Northern Sydney Health.

Construction value: \$21 million +



Queanbeyan Hospital, NSW

The new hospital, which has up to 60 beds, will deliver a new direction in healthcare services for the growing and aging Queanbeyan community.

The new facility provides expanded and improved integration between services with a range of patient care on the one site, including a community mental health facility.

The number of beds in the Emergency Department almost doubled and the capacity for surgery increased significantly with an additional operating theatre and procedure rooms.



Vasculab, University of Melbourne, Parkville VIC

erbas™ designed the refurbishment of level 4 of the 1960s Howard Florey Building at The University of Melbourne. The facility provided four Angio suites, sheep pens, lecture room, offices, cool room and labs. erbas™ provided mechanical, medical gases, electrical and AV services, taking due consideration to the extensive existing building services and animal care design guidelines to ensure both creature comfort and control of smells from the pens and surgeries to the office and lecture room.

Construction value: \$1 million +



Alice Springs Hospital, NT

The facility provides patients, staff and visitors with comfortable, healthy environments for healing, working and visiting.

The expansion entailed 18 additional treatment spaces and a 10-bed short-stay facility. In total, the facility has 31 treatment spaces including a paediatric treatment room, secure assessment rooms and resuscitation areas.

Construction value: \$25 million



Medical and Dental Clinics

erbas™ has completed medical centre developments for public and private operators and numerous HCF Dental fitouts in NSW and Victoria.

Our project experience extends to laboratories at primary, secondary, tertiary and commercial/ industrial level.

Education – Tertiary



Australian Hearing Hub, Macquarie University

The facility brings together the University's internationally leading research teams, clinical research/professional training teams and a major government research organisation, Australian Hearing with the National Acoustic Laboratories, research and implantation teams from Australia's leading hearing technology company and major not-for-profit organisations offering clinical and related social services for hearing disorders, like Royal Institute for Deaf and Blind Children and The Shepherd Centre.

Construction value: \$140 million



University of UNSW, Student Housing

This student accommodation building has incorporated green principles into all aspects of its design. A total of nine levels of student accommodation in five colleges spread over three stand-alone buildings.

Construction value: \$100 million



University of Western Sydney – Anatomy Building 24, Campbelltown, NSW

The new Anatomy Facility replaced a single level building at the Campbelltown Campus.

This new facility of 1,300 m² will provide 3 new Anatomy Teaching Laboratories and 3 new Biomedical PC2 Research Laboratories, Reception and Administration Offices for the School of Science and Health and the University Uniclinic.

erbas™ worked closely with the University, their user groups, facilities management and the design team to minimise any disruptions and deliver a successful outcome.

Construction value: \$21 million



Macquarie University, New Law School

The New Law School will be a dynamic and interactive 7,700 m² building with an amazing Atrium space dissecting the central parts. This building will be iconic addition to the Macquarie University Campus.

Construction value: \$39.5 million



UTS Central – University of Technology, Sydney

erbas™ provided master planning and design services to the UTS Central and Building 2 redevelopment at Sydney Broadway Campus. Phase one and two are underway, with completion expected in 2019.

Construction value: \$278 million



Universities - Victoria / Queensland

- QUT Sportsfield Car Park (refer Leisure and Recreation)
- The University of Melbourne - Vasculab Angio Suites (refer Health)
- QUT M-Block Labs
- Deakin University - HE Labs
- Deakin University - C Block Refurbishment
- RMIT Academic Streets Fitouts
- RMIT Building 202 and 204 Fitouts
- Monash University - Monash College
- Monash University - ASPREE Cryo Stores
- Monash University - Nursing Administration Fitout

Education – TAFE and Schools



Sydney Institute of TAFE, Ultimo - Building E and F

erbas™ provided design services for the state of art facilities constructed in two stages include science laboratories, large kitchens, photography, hospitality, tourism, fashion and design and floristry. Construction value: \$52 million



Lindfield Learning Village, NSW - Stages 1, 2 & 3

The unique vacant site of Kuring gai UTS grounds at Lindfield on Sydney's North Shore is the education campus of the future. With open plan learning and transitional education spaces, the heritage listed, brutalist architectural façades provide a melee of existing services. The challenges included accurately surveying the existing services to determine the reutilisation strategy and replacement methodology best suited to the end user environment. This was achieved using a combination of Point Cloud Survey data and exhaustive investigative prowess.



Northcote High School Performing Arts, VIC

This Victorian School Board Authority school project is arguably one of the more unique projects in the large portfolio of department projects delivered by erbas™. The project features ground level performing arts and drama in a double height space, music recital rooms and instrument teaching spaces, staff rooms and GLPAs. Exposed concrete finishes and services, along with musical instrumentation and a major arterial road adjacent required careful and considered acoustic treatment to the mechanical services. First floor levels included GPLAs and open balcony teaching areas. Construction value: \$3.5 million



Brighton Grammar School - Annandale Pavilion, VIC

Nestled within the constrained site boundaries of the existing school oval, gazetted council roadway with authority infrastructure and the senior school site on a flood plain, this project has not been without its challenges. The three level building boasts four new team change rooms, umpires rooms and store at basement level, kiosk, 24-hour community gym and function centre with commercial kitchen at first floor and state of the art sports science class rooms. erbas™ provided the building services and ESD consulting for the project. Construction value: \$6 million



Brighton Grammar School - Wellbeing Centre, VIC

erbas™ provided the lighting, AV, power, hydraulic and mechanical services to the heritage listed church on school grounds. The church has been transformed to re-purpose the space into a student and community wellness and meeting centre. The project involved removing the tiered flooring and chapel seating, minor excavation and installation of sub-floor air-conditioning with discharge carefully integrated to the joinery and booth seating. This allowed our lighting team to highlight the feature beams and ceiling, creating a truly beautiful space. Construction value: \$1 million



Brighton Grammar School - Tower Wing, VIC

The heritage listed Tower Wing building had a complete internal over-haul, bringing the grand old building up to the level of the adjacent facilities throughout the school. Along with specifying a new DDA compliant lift, erbas™ provided the lighting, AV, security, power, hydraulic and mechanical services designs. The Student Services administration area was also completed it the adjacent wing as part of the commission. Construction value: \$2.5 million

Commercial Fitout



Leo Cussens Centre for Law, VIC

erbas™ was appointed by Gray Puksand to provide the building services design for 4500 sqm of teaching and office fitout at 15 Williams Street. The project comprised a change of use from class 5 to class 9b (education) and thus several modifications to the base building provisions. The fitout, over two levels, included new circulation stair between, conference and board room, break out spaces, teaching spaces with high-end room booking system and offices.

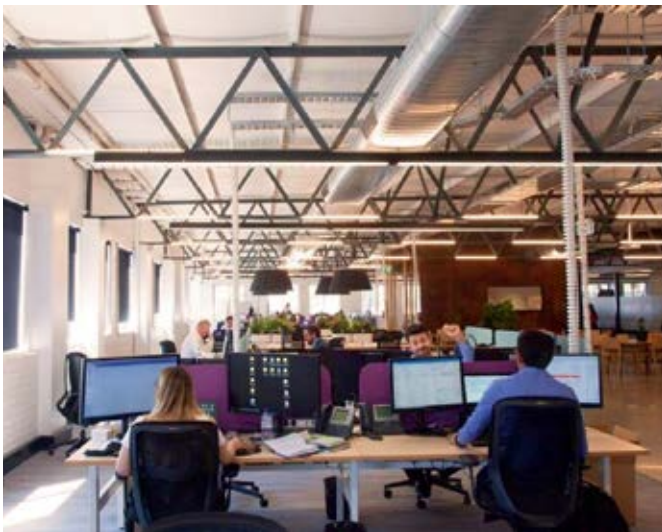
Construction value: \$6m



NSW Fire and Rescue, Greenacre, NSW

erbas™ provided the building services design to the new fire station and office area for the Greenacre Fire Station. Together with ADCO builders and architects Group GSA the Design and Construct development featured a new 3 story building at Greenacre, integrated fitout and under-croft car parking for 132 vehicles.

Construction value: \$21 million



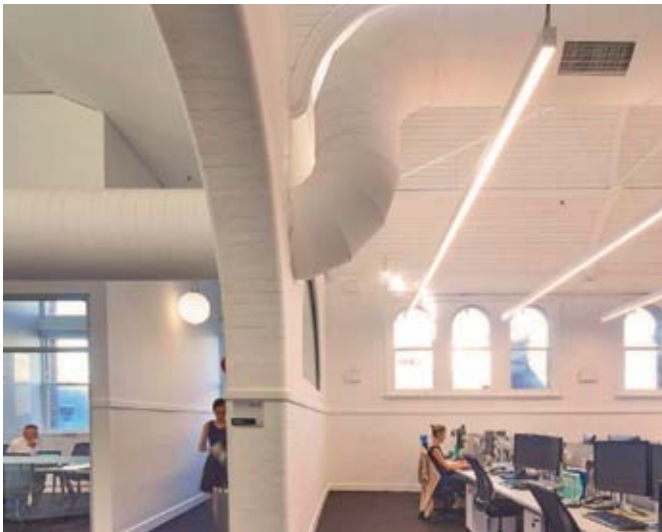
Thomas Duryea Logicalis, Richmond, VIC

erbas™ provided the fitout design services for the new agile workspace at TDL Richmond in conjunction with Montlaur Project Management and PTID. The project included new lighting design, supplementary AC, new kitchen facilities and both open plan and small offices, meeting rooms and comms room. The space boasts exposed services, room booking systems, video conferencing and specialist lighting controls with BMS.



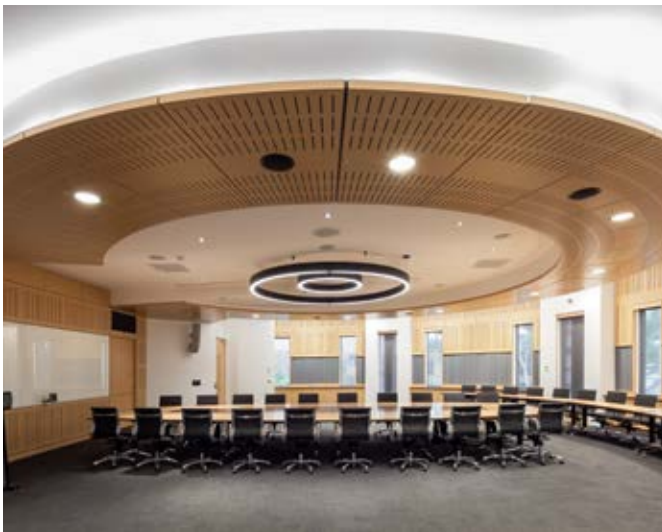
L'Oreal Training Academy, Pyrmont, NSW

erbas™ Melbourne Studio worked for L'Oreal with Techne Architecture and Interior Design to redesign the training facility in Pyrmont. The facilities include breakout spaces, four training rooms and a function and catwalk event space.



TAFE Headquarters, Ultimo, NSW

The project comprises a 6,000 m² fitout for a 3 storey heritage building at Ultimo with high ceilings. This building was built in 1891 and became one of the first technical colleges in NSW. The scope of works comprised stripping out all services and provision of new services to suit the heritage and new use of the interiors.



Macquarie University Council Room, NSW

erbas™ designed the electrical services for the Special Council Room. The large custom-built timber conference table (8m x 3m), incorporates state-of-the-art audio-visual facilities and was designed with the ability to be dis-assembled for large social functions. The ceiling design includes a central specialist lighting feature with two separate ring lights within the 'bow tie' feature ceiling.

Government



Grafton Correctional Centre

erbas™ is the mechanical, lift and ESD engineers documenting the Grafton Correctional Facility with John Holland Group and PPA Architects for the largest prison project in Australia. The new facility will include 1,700 beds and 95,000 m² floor area. The facility is expected to be completed in 2020.

Construction value: \$706 million



Parklea Correctional Centre

New redevelopment of the existing facility in Parklea to include a total of 650 beds (500 max security and 150 minimum security beds).

Construction value: \$185 million



Wollongong Court House

erbas™ was appointed to provide consulting services for mechanical, hydraulic, ESD, vertical transportation, security and electrical services on this project.

Works to Wollongong Courthouse were designed to refurbish the existing courthouse whilst maintaining heritage features of the building.

Construction value: \$12 million



Riverstone Police Station

This commission involved the design of 2,500 m² of modern facilities to meet the current and future functional needs of NSW Police.

The design solutions incorporate modern services approaches which provide safe and secure facilities that assist in improving integration between elements of the NSW Police Force, Department of Correctional Services and the Department of Justice and Public Prosecution.

Appropriate Environmentally Sustainable Design (ESD) has been applied and ABGR protocol was followed.

Construction value: \$15 million



Mount Druitt Library and Community Resource Hub

Mt Druitt community centre underwent a major refurbishment and extension to create a new two storey, multi-purpose Community Resource Hub including library over 1,500 m².

This contemporary facility meets the needs of numerous sectors of the local community. It provides training and meeting rooms, designated areas for health and welfare practitioners and an extension to the existing library with expanded IT capabilities.

Construction value: \$6 million



Kingaroy Police Station, QLD

erbas™ provided the complete building services design package for the staged redevelopment of the Kingaroy Police Station and Watch House with Congrad Gargett Architects.

Construction value: \$5 million

Infrastructure and Industrial



Train Stations

erbas™ has successfully completed over 50 NSW rail projects to date.

Project include revitalisation, major ventilation and communication room upgrades, easy access upgrades, lift upgrades, fit-out works and refurbishments.



ING Goodyear Warehouse, Eastern Creek, NSW

This facility is a purpose built tyre storage and distribution centre consisting of a 15,000 m² warehouse / distribution space and a 1,000 m² office.

This project has been awarded a 4 Star Green Star – Industrial Design v1 certified rating from the Green Building Council of Australia.



Ingham Micro Warehouse Facility

This facility is a purpose built electronic parts storage and distribution centre consisting of a 36,500 m² warehouse and a 2,000 m² office.

This project has been awarded a 4 Star Green Star – Industrial Design v1 certified rating from the Green Building Council of Australia.

Heritage



NSW Fire & Rescue, Pyrmont, NSW

erbas™ provided the complete building services design to the 2016 UCIA award winning adaptive reuse for the heritage listed Pyrmont Fire Station.



Parliament House Victoria – Sessions Café, Queen's Hall, Undercroft Offices

erbas™ has a strong heritage capability and has worked in conjunction with Point of View on multiple projects at Parliament House including Sessions Café, MPs undercroft corridors and Queens Hall. Careful consideration is required to ensure the impact of the services on the heritage elements of the building is minimised or avoided. erbas™ also designed the new computerised emergency lighting system throughout the entire building.



Village Belle Hotel, St. Kilda, VIC

The heritage listed Village Belle Hotel is one of Melbourne's premier pub, gaming and club locations. Situated on Barkly Street St. Kilda, the venue boasts a new atrium beer garden, public bar, gaming facilities, restaurant, boutique apartments and basement car park. erbas™ was engaged to consult for all the building services engineering elements of the project. The highly energy efficient design includes spray mist cooling, glycol-chilled water bar fridges and beer cooling systems, air-to-air heat exchangers, lighting control systems, building management systems and more.

Construction value: \$12 million

Retail



IKEA, Marsden Park

The \$40M IKEA Marsden Park site is situated within the new Sydney Business Park precinct which is a master planned mixed use commercial precinct covering 265 hectares. The overall building footprint is 28,000 m² with 800 on grade car parks and it will be IKEA's first single level store to be built in Australia.

Construction value: \$40 million



Aldi Stores, NSW

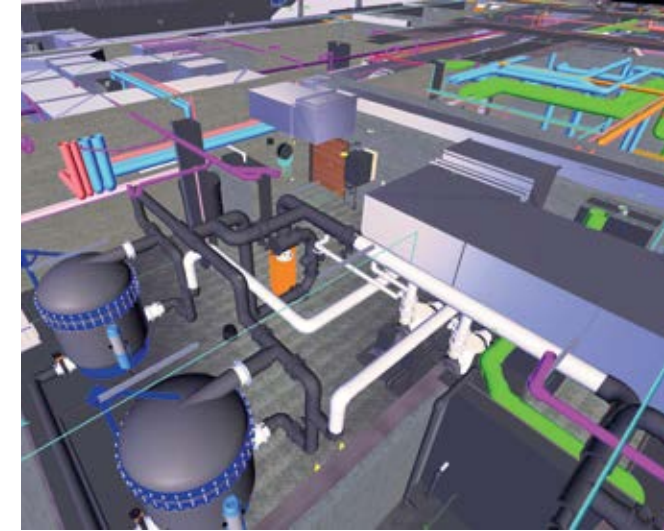
erbas™ has provided the mechanical and energy services design and consulting for over 150 stores in NSW alone.



Gucci Retail Store, Collins Street, VIC

erbas™ provided the building services design for the flagship Gucci store on Collins Street. The building required extensive structural and services work for extension from the original store into the adjacent tenancy.

Modelling



Shore School - B.H. Travers Building, NSW

erbas™ provided design and consultancy for the fire and hydraulic services for the new aquatic centre and sports hall on the North Sydney campus of Shore School. The project delivery required a LOD 300 specification 3D delivery.

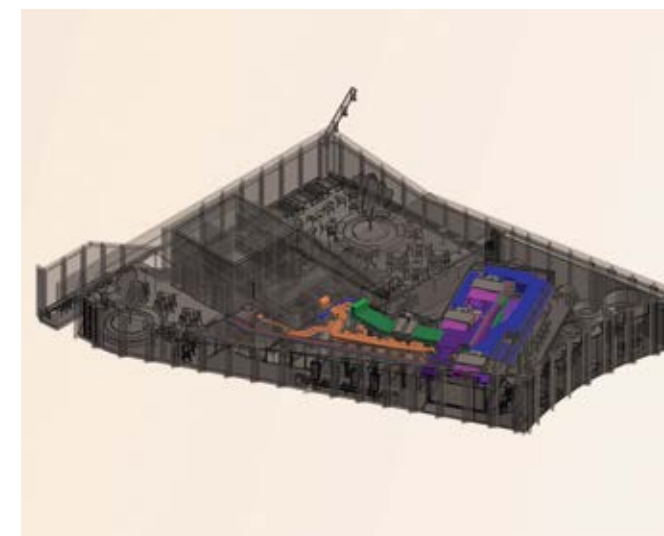
erbas™ took the peer review role for the design packages. Utilising Navisworks clash reporting and live workshops, the transition from design into construction has been very smooth. This project has further reinforced our 3D capability in the market and our firm's presence in the education sector.



Cessnock Correctional Centre

Full design and documentation for mechanical, electrical, hydraulic, fire and ESD services for the new and existing Cessnock Correctional Centre. The building designs include but are not limited to maximum security accommodation (330 beds), movement control, visits, pre-visits, administration, medical wings and detox cells, property store, segregation wing, bulk store, industries building, and modifications to four other buildings currently operating on the site. erbas™ also completed the previous \$58 Million extension in Cessnock in 2010.

Construction value: \$130 million



Untied Restaurant, Barangaroo

Our Melbourne team worked with Techne Architecture and Interior Design in conjunction with Lendlease to develop the fitout of building R7 of the Barangaroo precinct in Sydney. The rooftop bar and restaurant base-building design provided a huge number of challenging architectural features and low floor to roof clearances. Our Revit modelling capability allowed us to design a performance based air conditioning and kitchen extract system featuring odour treatment and self-cleaning hoods. The tenancy has been applauded for out performing other comparable tenancies in the precinct from an energy usage perspective.

Our people



Ken Gurcan Erbas, Managing Director

Qualifications:

B.Sc., M.Sc., MIEAust, CPEng, NER, IntPE, APEC Eng., FAIRAH, MASHRAE, Affiliate CIBSE, RPEQ, RBP

Ken has nearly 40 years of mechanical services design experience in a wide range of commercial, residential, hospitals, laboratory, residential, education, council, government and special military projects. During this time Ken has worked in America, Germany and Turkey. In Australia, he held several senior positions as Chief Engineer and Associate Director in prestigious consulting companies.

Project experience:

- Australian Hearing Hub, Macquarie University, NSW
- Orange Hospital, NSW
- Bexley Aquatic Centre, NSW
- NSW Correctional Centres: Cessnock, South Coast (Nowra), Wellington Mid-west, Silverwater and Mid North Coast (Aldavilla)

Lincoln Merlo, Director



Qualifications:

BE (Hons), BSc, CPEng, MIEAust, CEng, MCIBSE, RBP, RPEQ, NER

Linc is a passionate, approachable and competent engineer with experience working on the client, contractor and consultancy sides of construction in Australia and overseas. He is a Registered Building Practitioner in Victoria and Registered Professional Engineer in Queensland for all building services, electrical and mechanical engineering.

Project experience:

- Heritage Projects at London's Law Society
- Google HQ, London
- Village Belle Hotel
- Holiday Inn Werribee
- NMFC AFLW Arden Street Extension and Lighting
- QUT Sportsfield Complex and Car Park
- TLC Aged Care, Mordialloc

Michael Slatter, Director



Qualifications:

Diploma of Hydraulic Engineering

Michael has had over 20 years experience in the Construction and Design Industries both here, in Australia and overseas. This has led him to develop a passion for innovation and an eye for detail. His positive and uncomplicated approach to professional relationships ensures that clients are informed and part of the process from concept to completion. This method of conducting business has resulted in many successful project deliveries.

Project experience:

- Phnom Penh International Airport (ASI Industries)
- Sea Life Aquarium Sydney, NSW
- Bankstown Trade Training Centre, NSW
- Engadine Residential Aged Care Facility, NSW
- UTS Central, NSW



Emre Erbas, Director

Qualifications:

AFFIL. AIRAH, NABERS Accredited Professional, ESD

Emre has over 14 years experience in the building services industry across a diverse range of projects including: residential, commercial, retail, industrial, educational, hospitals, aged care, hotels and motels. Emre has a passion as a hands-on project leader and has extensive experience across many project sectors. He manages client liaison and requirements, internal delivery teams, mechanical services designs and the overall delivery of innovative coordinated design solutions. Emre prides himself on his projects design solutions, which are of the highest quality and ready for construction. Emre's involvement in all size projects and previously being involved in the AIRAH NSW committee ensures his designs match current industry trends and the incorporation of green initiatives in project designs.

Project experience:

- Nepean College Kingswood Campus – 4,000 m² Teaching Facilities
- Harold Park Precinct Residential, NSW
- Charles Sturt University – Orange and Wagga Dentistry, NSW
- Ultimo TAFE Building Q Automotive, NSW
- Grafton and Cessnock Correctional Facilities, NSW

Ilkay Erbas, Finance Director

Qualifications:

BSc (Economics)

Ilkay has worked with erbas™ over 14 years as Finance Director. Ilkay has a strong commercial background having filled finance, marketing and logistics rolls previously with ASELSAN (Turkey, 8 years), Elsafe (3 years) and Rockwell Automation (8 years).

Alex Lee, Associate Director

Qualifications:

Bachelor of Civil Engineering, Registered Building Practitioner

Alex is a Registered Building Practitioner in Victoria with over 15 years' specific industry experience, primarily with civil, infrastructure and buildings works such as water supply, fire services, sewerage and stormwater drainage system. Alex has experience working on a variety of projects, on both the contractor and consulting engineer's role in Australia and internationally. Apart from engineering design, Alex also has experience as Project Manager during his involvement with the North West Precinct project at Monash University, Clayton which won 2 awards at the 2015 Victorian Architecture Awards.

Project experience:

- Monash University Green Chemical Futures, VIC
- Deakin University's Australian Future Fibres Research and Innovation Centre (AFFRIC) Geelong, VIC
- Fiona Stanley Hospital, Murdoch WA
- Ararat Prison, Ararat VIC
- Numerous VBSA Public Schools and Private Schools
- Marina Bay Sands Hotel & Casino, Singapore





Mark Albertella, Associate Director

Qualifications:

Bachelor of Mechanical Engineering

Mark has an impressive career extending over 20 years as a mechanical engineer and MEP manager within Australia and internationally, which has led him to become a valued consultant within the building services industry. His more recent projects include a range of large scale retail and mixed use developments of values up to \$450M. Mark takes a hands-on leadership role within each project team to ensure the client's requirements and project deliverables are met with regards to time, budget and quality.

Project experience:

- HCF dental clinic roll-outs
- Sydney University Faculty of Pharmacy Dispensing Lab, NSW
- Top Ryde Shopping Centre, NSW
- Cyan Resort – Hotel and Residential Villas/Towers, Vietnam
- Lindfield Learning Village



Paul Jones, Associate Electrical Engineer

Qualifications:

BSc (Hons) Physics - University of Durham. MSc Building Services Engineering - University of Loughborough

Paul has over 16 years' experience in the building services industry as an Electrical Engineer and has worked in Australian and the UK in a comprehensive range of sectors. His recent projects include event infrastructure, large scale data centres, commercial, and education projects. Paul has a dedication for engineering design and a proven track record for delivering excellent services to cost, quality and programme requirements.

Project experience:

- Australian Formula 1, Melbourne VIC
- Australian National University Supercomputer installation, ACT
- Google office fitout, NSW
- RMIT Swanston Academic Building, VIC
- Jewel Towers, Gold Coast



Anton Smolin, Associate

Qualifications:

Bachelor of Engineering, Master of Business Administration

Anton has over 10 years of industry experience in project management and electrical engineering. He has managed numerous small and large multi-discipline services contracts, including managing relationships with internal and external teams as well as overseeing project scope, tasks, deliverables, budget and risks. He has comprehensive capabilities in power, lighting, security, communications, AV and fire services design; and demonstrates strong commitment to company, project and industry standards, systems, procedures and guidelines.

Project experience:

- Lindfield Learning Village, NSW
- Macquarie University Law School
- Lloyd's Inn, Sydney
- Cessnock Correctional Facility
- Kawana Waters Aged Care



Sean Foord, Associate Hydraulic Engineer

Qualifications:

Diploma of Hydraulic Engineering

Sean has over 20 years' experience in the design of hydraulic engineering services having a very detailed approach to documentation and coordination.

Project experience:

- St Euphemia College Bankstown Sydney NSW
- Knox Grammar School – Performing Arts Centre
- 100 Glover Street, Cremorne
- Charles Sturt University, Albury



Jane Lai, Lead ESD Engineer

Qualifications:

PhD, BEng(Env), BCom, CPEng, NER, MIEAust, WELL APTM, Green Star AP, NABERS Accredited Assessor, BESS Trained Professional, EnviroDevelopment Professional

Jane provides result orientated sustainability services and ESD strategic direction to clients. She has a passion for sustainable design and has worked on projects encompassing Green Star, WELL, and NABERS. She has demonstrated experience in building upgrade strategies, energy performance analysis, and NCC Section J compliance. Jane also has a keen interest in corporate sustainability strategy and has extensive experience in reporting environmental, social and governance aspects of organisations with the Global Real Estate Sustainability Benchmark assessment survey and preparing sustainability reports that align with the Global Reporting Initiative and Integrated Reporting frameworks. Jane also provides advice in portfolio performance improvement opportunities.

Project experience:

- Australian Taxation Office, Box Hill, VIC
- Various GSA Student accommodations, Melbourne, VIC
- Learning and Teaching Building, Monash University, Clayton, VIC
- RMIT Village, North Melbourne, VIC
- Cbus Property, GRESB preparation and submission



Terrence Hing, Associate

Qualifications:

BE (Hons), CPEng, MIEAust, RBP

Terrence has over 10 years' experience in the building services industry. He has led internal services teams to deliver multidisciplinary projects in the commercial, education, hospitality, industrial, residential and retail sectors. His experience includes project management, engineering design, technical due diligence reviews, feasibility studies, compliance audits, witness testing and commissioning.

Project experience:

- SA Ambulance Service Rescue Retrieval and Aviation Service (RRAS), SA
- Your DC Data Centre, SA
- Plumbing Industry Climate Action Centre, VIC
- Chadstone Shopping Centre, Chadstone, VIC - 250 key, 5-star hotel.
- Olderfleet, 447 Collins Street, Melbourne, VIC



Gus Affara, Associate Mechanical Engineer

Qualifications:

Bachelor Science in Mechanical Engineering

Gus is a Registered Building Practitioner in Victoria & Registered Professional Engineer of Queensland with over 22 years' experience working in the Building Services industry. Gus has experience working on a variety of projects, on both the contractor and consulting engineer's role in Australia and the South Pacific region.

Project experience:

- Bannockburn Community Centre, Bannockburn VIC
- Melbourne Sea Life (Major fit-out), Melbourne VIC
- ANU University (New Biology & Chemistry buildings and fit-out) – Canberra ACT
- Kaufland Distribution Centre (4 warehouses and 4 storey office) Mickleham VIC
- Blue Cross Headquarter (2-Storey Tenancy Offices Fit-out), Camberwell VIC



Isaac Yip, Senior Civil Engineer

Qualifications:

BE(Hons) MIEAust CPEng NER APEC Engineer IntPE(Aus) RPEQ

Isaac has more than 30 years experience as a design engineer in the Australian construction industry. In this time he has gained familiarity with over 30 local council areas around the metropolitan area of Australia's largest urban centre. Isaac's early interaction with hydraulic consultants has given him an appreciation of building services coordination across a range of pipe systems to supplement his own traditional engineering training and practical experience in stormwater design.

Project experience:

- South Pacific Private Hospital – 24 Beach St Curl Curl – Alterations
- Toongabbie Christian School – New carparks & classroom building
- The Rules Club – 188 Fernleigh Rd Wagga Wagga – Club extension & new hotel
- Parramatta Council Operations Centre – 316 Victoria Rd Rydalmere
- Synnex Automated Warehouse - 14 Parramatta Rd Lidcombe

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