

ACE



**ELECTRICAL SERVICES
PTY LTD**

**Ace Contractors
Group Pty Ltd**
www.acecon.com.au

ACE CONTRACTORS GROUP PTY LTD



Ace Contractors Group is a collection of companies providing a diverse portfolio of services to our clients since 1971. Our business lines are civil, infrastructure, landscaping, electrical, environmental, equipment and water services. These units combine to offer our clients an integrated service, mitigating interface risks.



Electrical Infrastructure Pty Ltd

Design, manufacture, installation, commissioning and servicing of switchboards, motor control centre, high voltage switchyards, substations, PLC, control and SCADA systems. They also support other ACE companies with general electrical works and public lighting. Accredited Contractor on VESI Public Lighting and VEDN Civil conduit install for both Jemena and Powercor, including approved VESI Project Management.



Civil Services Pty Ltd

Earthworks and civil works associated with the construction of major roads, large commercial and industrial developments, schools, universities, hospitals, defence sites, correctional facilities, etc. Due to the large scale of the projects, ACE's scope is often delivered via subcontract to construction companies. Scope elements include earthworks, roads, footpaths, drainage, car parks and lighting among others.



Landscape Services Pty Ltd

Construction and maintenance of major landscape projects, including commercial developments, municipal parks and gardens, sporting facilities, streetscapes and plazas, and landscape works associated with public infrastructure.



Infrastructure Pty Ltd

Design and construction of works for statutory authorities such as VicRoads, V/Line, PTV, VicTrack, councils and Department of Defence. Infrastructure projects include roads, bridges, shared paths, public open spaces, and bus/tram/rail infrastructure.



Water Services Pty Ltd

Design, manufacture and construction water and waste water infrastructure for water authorities. Works included pump stations, treatment facilities, water storage, channels, regulators, and meters.



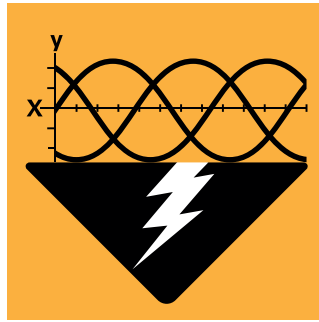
Equipment Services Pty Ltd

Hire of construction plant and equipment. ACE Group has a modern fleet of GPS/LPS controlled earthmoving plant (excavators, dozers and graders).



Environmental Services Pty Ltd

Operation of waste transfer stations, active landfill disposal sites, and resource recovery facilities; landfill cell and leachate pond development; soil remediation; asbestos removal; and general environmental services to residential, industrial, municipal and commercial customers.



ACE ELECTRICAL SERVICES PTY LTD

Delivering expertise in the management, design, construction and maintenance of electrical systems and infrastructure associated with water and power infrastructure, control system, telecommunications and public lightning to multiple industries across Australia

We specialise in, but are not limited to, the design, construction and commissioning of:

- ▶ Power, control, automation and SCADA systems.
- ▶ Water infrastructure projects (pump stations & treatment plants)
- ▶ Switchboard and monitor control centres
- ▶ Underground Low and High voltage power reticulation systems (Accredited Contractor on VESI Public Lighting and VEDN Civil conduit install for both Jemena and Powercor, including approved VESI Project Management.)
- ▶ Standby and emergency power generation systems.
- ▶ Public and street lighting
- ▶ Solar & Wind Farm Electrical Services
- ▶ Maintenance and servicing of Low and High voltage systems (planned and unplanned)
- ▶ Substations and switchyards

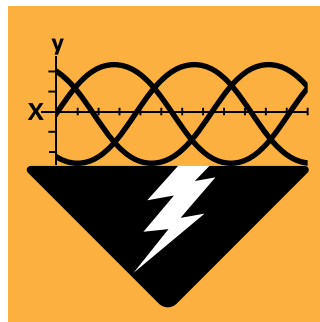
A subsidiary of Ace Contractors Group, Ace Electrical Infrastructure has operated and serviced the Water, Heavy Industry and Infrastructure industry for over 15 years.

ACE Electrical has the ability to take on projects at either end of the scale, ranging from complex high value projects to small electrical works, and ongoing maintenance and servicing. Our qualified team of electricians, supported when required by specialist sub-contractors, deliver projects that include the design, construction, installation, commissioning and servicing of Switchboards, Motor Control Centres, High Voltage Switchyards, Substations, PLC, Control and SCADA systems.

Working in collaboration and partnership with the Water, Landscape and Civil divisions of the ACE Group, we are able to deliver turnkey projects with the seamless integration of multiple trades. The primary principle behind its services is being able to offer a one-stop-shop to their diverse range of clients, and the success of this approach has assisted in ACE Electrical building long term relationships.

The variety and complexity of projects completed by ACE Electrical continues to grow, which is a testament to the team's capability, their track record, and the strong relationships and testimonials received from their clients.





IN SAFE HANDS

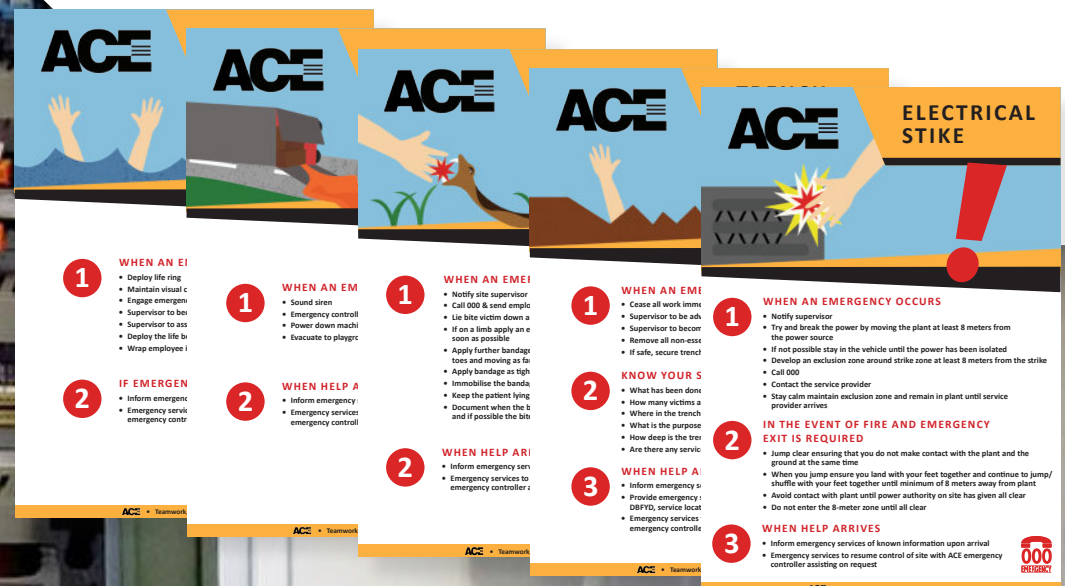
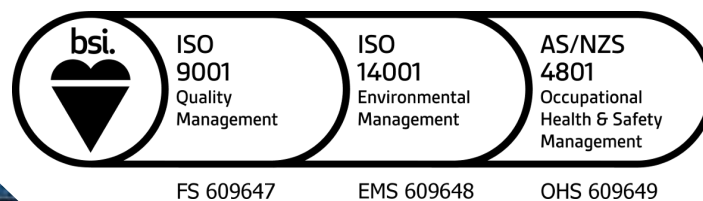
ACE works within a highly regulated environment, meeting international and national standards. Additionally most clients have their own stringent specifications and requirements that ACE must meet. ACE is compliant with the Building Code 2016 and Fair Work Act 2009. We are members of the Master Builders Association, the Civil Contractors Federation and Landscaping Victoria.

ACE Electrical is certified as an electrical contractor in Victoria, New South Wales, Queensland and Tasmania, and is accredited with the Victorian Electrical Distribution Network (VEDN). ACE is prequalified to work on Essential Energy's assets in NSW and Queensland, and on CitiPower Powercor and AusNet Service's assets in Victoria.

We have an integrated management system accredited to the following standards:

- ▶ Australian Government Building and Construction WHS Accreditation Scheme, accredited by the Office of the Federal Safety Commissioner
- ▶ Occupational Health and Safety Management (AS/NZS 4801)
- ▶ Environmental Management (ISO 14001)
- ▶ Quality Management (ISO 9001)

These accreditations underpin our ability to tackle the most technically complex and commercially demanding projects safely, to a high standard and with a strong level of project management consistency.



NUNAWADING CIVIC CENTRE STANDBY GENERATOR WHITEHORSE CITY COUNCIL



266K



**Nunawading,
VIC**

As part of their backup power supply system upgrade, Whitehorse City Council required larger standby diesel generator. ACE as engaged to supply and install a new 605kVA diesel generator for the civic centre and library located in Nunawading.

ACE's scope included:

- ▶ All civil works, including a new generator slab, underground conduits and pits
- ▶ Supply and installation of the new standby generator
- ▶ New Automatic Transfer Switch (ATS)
- ▶ Solar power isolation contactors (PLC)
- ▶ Modification of the existing switchboards to accommodate the new generator
- ▶ Testing and commissioning
- ▶ Operation and maintenance manuals.

PALM ISLAND STP ELECTRICAL WORKS

PALM ISLAND ABORIGINAL SHIRE COUNCIL (PIASC)



0.5M

The Palm Island Sewage Treatment Plant (STP) was last upgraded in 2008 and since then has had operational issues and multiple equipment failures.

In 2016, GANDEN designed a much needed upgrade of the STP. This plant upgrade has been designed for current and future anticipated growth of the island population.

Aeramix have been appointed head contractor to undertake the latest upgrade of the STP, and have engaged ACE to undertake the related electrical works.

This is ACE's first project in QLD, and required ACE to obtain a QLD Electrical Contractor Licence. ACE's scope includes:

- ▶ New main switchboard (inclusive of a new PLC Panel). This will replace the existing main switchboard, which is currently feeding the old plant equipment. All existing field equipment, light and power, that are to remain in service, will be connected to the new main switchboard, then the existing switchboard will be decommissioned and removed.
- ▶ New SCADA and communications system.
- ▶ Electrical, instrumentation and controls installation, including allowance for solar plug in.
- ▶ Testing and commissioning of the complete system.

**Palm Island,
QLD**

WARRNAMBOOL WATER RECLAMATION PLANT (WRP) DECANTER CENTRIFUGE INSTALLATION WORKS

WANNON WATER



0.7M



**Warrnambool,
VIC**

Currently, the Warrnambool Water Reclamation Plant (WRP) uses an activated sludge process comprising of four Intermittent Decant Extended Aeration (IDEA) tanks. Waste Activated Sludge (WAS) from the IDEA tanks is transferred directly to two Belt Filter Presses (BFP) located in the sludge dewatering building (or solids processing area).

As part of this contract, one of the existing BFPs (BFP 1) will be decommissioned and replaced with a decanter centrifuge. ACE previously installed the other existing BFP 2 and it will remain in service.

The scope of work includes:

- ▶ Decommissioning and disposal of existing TEMA BFP and associated redundant equipment.
- ▶ Civil, structural, mechanical, electrical and all other interfaces and ancillary works associated with the installation of the decanter centrifuge system.
- ▶ Centrifuge installation works.
- ▶ Installation and commissioning of a new polymer dosing system.
- ▶ Design, supply and installation of dewatered sludge screw conveyors.
- ▶ Commissioning of the ancillary and interface works.
- ▶ Design, supply and installation of new spreader conveyors in the bin area.
- ▶ Design, fabrication, supply and installation of the new sludge handling switchboard and control system.
- ▶ Modification and integration of the new system into the existing plant PLC and SCADA system.
- ▶ Commissioning of the complete system.

JUNEE AND TEMORA ZONE SUBSTATIONS

ESSENTIAL ENERGY



2.85M

**Junee and
Temora,
NSW**

Essential Energy contracted Ace for the construction of new infrastructure within existing high voltage substations at the Junee 66KV and Temora 66KV switchyards. To meet the client's operational requirements, the Junee and Temora Zone Substations project was divided into the 4 separable portions:

Separable Portion A: Junee 132kV Greenfield Site

Separable Portion B: Junee 66kV Brownfield Site

Separable Portion C: Temora 132kV Feeder Bay

Separable Portion D: Capacitor Bank Installation

All works included civil and electrical scopes.

BAIRNSDALE WASTE WATER TREATMENT PLANT (WWTP) POWER HUB SWITCHBOARD - DESIGN AND CONSTRUCT EAST GIPPSLAND WATER



East Gippsland Water are in the process of undertaking a number of significant upgrades at the Bairnsdale WWTP, which include:

- ▶ Refurbishments of the sludge digester, installation of a new methane gas capture
- ▶ Storage and heat/power generation system
- ▶ Upgrade of the Trade Waste SPS
- ▶ Installation of a new inlet screen, bypass screen and sludge dewatering system
- ▶ Installation of an inlet flow balancing system
- ▶ Installation of Solar PV array to offset site power consumption



160k



**Bairnsdale,
VIC**

ACE's scope of work:

- ▶ Offsite design and fabrication of switchboard
- ▶ Site establishment
- ▶ Supply and installation of conduits and pits
- ▶ Installation of cabling
- ▶ Installation of new power hub
- ▶ Termination of power and control cables
- ▶ Changeover to new switchboard and generator
- ▶ Testing and commissioning

PUBLIC, STREET AND ARCHITECTURAL LIGHTING PROJECTS

Ace Electrical has been involved in many public lighting projects in conjunction with other ACE divisions as well as individually. Below are a few featured projects which we are proud to be part of.

GREVILLE ST URBAN REALM IMPROVEMENT ELECTRICAL WORKS



New inground power connections, supply and installation of lighting poles and fixtures, inground conduit connections, installation of catenary flower luminaire, test and commissioning, supply and installation of LED pavers and relocation of main switchboard associated with the Greville St Improvement Works.

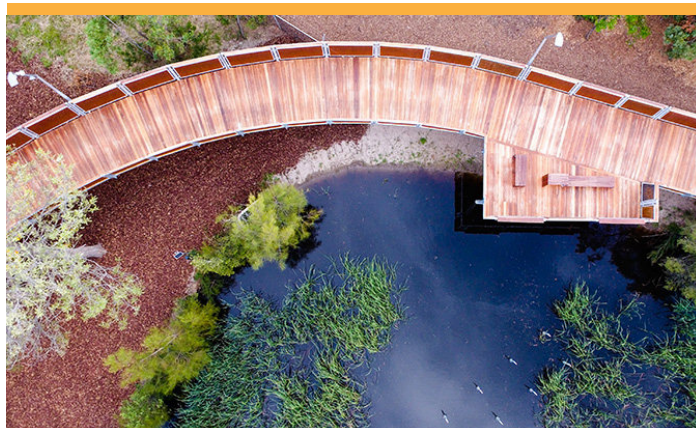


VIC



0.2

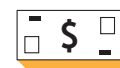
MONASH UNIVERSITY TAN PROJECT - ELECTRICAL AND LIGHTING WORKS



Supply and installation of pole mount public lighting as part of the Ace Landscape package completed in October 2016.



VIC



268k

GARDEN CITY RESERVE PATH LIGHTING



Ace was contracted by Port Phillip City Council to supply, install, test and commission public lighting along the central pedestrian path of the Garden City Reserve.

This project was in response to the Council's Sustainable Lighting Guidelines and objective to deliver new energy efficient lighting.



VIC



114k

COBAR 66KV REGULATOR STATION CIVIL & ELECTRICAL CONSTRUCTION

ESSENTIAL ENERGY



The 66kV feeder #811, which originates from the Nyngan 132kV zone substation, currently has limited capacity primarily due to the voltage level at the Cobar town zone substation. This is being affected by the voltage regulation on the 132kV and 66kV networks. Capacity is also affected by high and low loading periods.

This cannot currently be managed effectively. In addition, the 66kV supply to Cobar town zone substation is constrained by voltage regulation and conductor ground line clearance violations, both of which adversely affect supply capacity.

A new regulator and upgrading of the 66kV feeder are required to maintain the 66kV voltage level at Cobar, at acceptable levels during high and low loading periods, and to rectify the violations of the 66kV feeder. In doing so, consistent supply reliability will be maintained. The new 66kV regulator site is to be constructed on a new bench about 53 km west of Nyngan, on the northern side of the Barrier Highway in NSW.

Ace will undertake design development and construction works (civil and electrical) for the Cobar 66kV Regulator Station, including the control building on the greenfields site. Our scope includes the provision of all services, labour, materials, plant, consumables, equipment and supervision necessary for the completion of works.

ACE's scope of work:

- ▶ All earthworks
- ▶ Installation of earth grid
- ▶ Foundations for switchyard structures
- ▶ New control building construction
- ▶ Erection of all steel structures
- ▶ Erection of all power equipment,
- ▶ Strung and rigid busbars and fittings
- ▶ Secondary cables and related terminations
- ▶ Operational checks of HV disconnectors, earth switches and HV connections.



1.2M

**Cobar,
NSW**



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