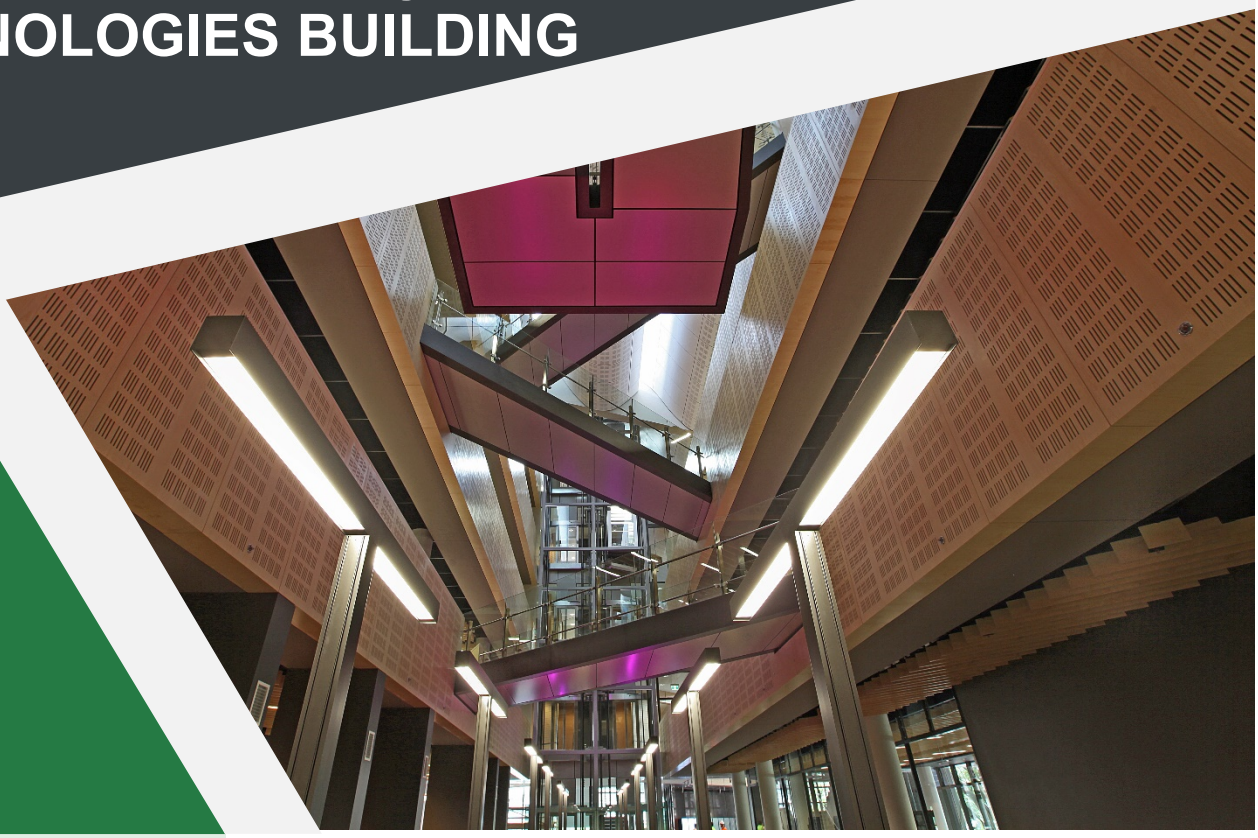
UNSW TYREE ENERGY **TECHNOLOGIES BUILDING**



PROJECT **DETAILS**

PROJECT LOCATION:
Building H6 - UNSW Campus Anzac Parade Street, Kensington Sydney

COMMENCEMENT DATE:
September 2010

COMPLETION DATE:
January 2012

TYPE OF CONTRACT:
Design & Construct

CONTRACT VALUE:
$11 Million +

GROSS FLOOR AREA:
16,000 sqm

PROJECT MANAGER:
Frank Palamara

CONSTRUCTION MANAGER:
Paul Logie

OVERVIEW **TRADE PACKAGE**

The Tyree Energy Technologies Building is the new home of energy research at the University of New South Wales.

The project contained innovative energy and technologies building and is located on the last prime site on campus, fronting both Anzac Parade and the University's entry to the mall way and serves as a gateway for the campus.

This building is said to be a landmark on the campus, which is: gbca green star registered; energy-efficient building and a front leader for research, education and industry collaboration in the development and practical implementation of sustainable energy technologies.

The scope of works comprises the:

- supply, installation, testing, commissioning,
- maintenance and defects liability service of materials labour and
- equipment for the complete Electrical Services installation.

The work shall include all necessary minor and incidental work required to implement the intent and meaning of this specification and associated drawings.

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COMMERCIAL **FACTORS**

- Underground supply for HV and LV network cables.
- New private HV chamber substation, which has set a benchmark in the campus.
- Co-ordination and liaison with the Power Supply Authority.
- Consumers Mains and associated conduits.
- Closed transition switches and associated controls, for the connection of tri-generation system.
- Main Switchboard.
- Power factor correction equipment and associated controls.
- Submains, complete with all terminations to all switchboards including switchboards as supplied by all trades.
- Main distribution boards.
- Meter panels and distribution boards.
- Earthing system.
- General purpose socket outlets.
- Special socket outlets
- Starter socket outlets and soft-wired socket outlets for workstations.
- Cable trays and ladders, light fittings, lighting control systems, light and power subcircuits, ceiling fans and controls.
- Residual current device/earth leakage current protection
- Skirting ducts.
- Floor boxes and associated conduits.
- Emergency escapes lighting systems and exit signs.
- Computer based emergency escape lighting and exit sign monitoring system.
- Interface with building monitoring system.

PROJECT **CHALLENGES**

- In the construction phase, the atrium was found to be a major obstacle in regards to services coordination to ensure services could reticulate in congested space.
- The Atrium has a unique design with sails for the mounting of the PV cells, due to its complex design this impacted construction times within the building, which made our commissioning phase compressed to gain completion.
- The Tyree building also had many difficulties in design to ensure the 6 star greenstar design was met.
- Other items which had many challenges were items such as the building interfaces for the Infomatics showcase which displays to public all the buildings energy demands and savings.

PROJECT **SPECIFICS**

The UNSW Tyree building is 16,000 m2 which houses facilities such as:

- wet and dry research laboratories,
- teaching laboratories,
- post-graduate write-up spaces,
- multiple raked theatres,
- a range of informal learning and collaborative spaces,
- showcase/exhibition space,
- a rooftop experimental space and
- a prototype carbon trading office.

- Targeting a 6 Star Green Star design rating, which we installed with 1,100sqm of roof-mounted solar panel array utilising the latest UNSW solar cell technology.

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