

Arts & Public



Norman
Disney &
Young
A TETRA TECH COMPANY



Table of contents

INTRODUCTION	03
OUR VALUES, PURPOSE & VISION	04
WHAT WE DO	05
OUR ARTS & PUBLIC BUILDING CAPABILITIES	06
SUSTAINABLE ARTS & PUBLIC BUILDINGS	07
NDY ARTS AND PUBLIC BUILDINGS PROJECT EXPERIENCE	08

**NDY by
numbers**

 established
1959

 **600+**
people

 **9**
key markets

12 
offices

 **5**
countries

Introduction

Norman Disney & Young is delighted to present this outline of our capabilities and expertise in arts and public buildings projects.

Creative visions are typical in arts complexes and specialised engineering skills are required to make these a reality. Our ability to innovate and meet challenging briefs is evident in the pedigree of our projects.

Major public projects are featured within our service offering and we have worked on such projects in Asia, Australia, Canada, Europe, New Zealand and the UK.

Public buildings and arts facilities typically require unique levels of usability and our multi-disciplinary approach ensures that client requirements are fulfilled.

This document highlights our capabilities for arts and public buildings projects and showcases some of the leading examples of our work. We look forward to the prospect of working with you on your next project.



Our **values**

Excellence

Do it once, do it well

Leadership

**Lead in our profession, industry
and the community**

Integrity

Treat others as we wish to be treated

Collaboration

Listen, share and contribute

Accountability & Ownership

**Understand the impact of our actions
and own the outcomes**

Innovation

Inspired creativity to challenge the norm

Our purpose
is making
spaces work

Our **vision**

To enhance the lives of others,
by engineering outstanding projects,
mindful that every project matters.

To sustain deep and trusting
relationships with our clients,
through solving their problems and
serving them with utmost reliability,

and

To engage our people with
meaningful, rewarding and
inspiring opportunities.

Our ethical statement

NDY has a proud tradition of upholding the highest ethical standards in the manner by which we conduct ourselves as a company. Read our ethical statement at www.ndy.com/about-us/our-ethical-statement



Cultural Centre – Cicada Urban Art Installation, Brisbane

What **we** do

As consulting engineers, our purpose is making spaces work. We listen to the unique requirements of each client, and tailor our services accordingly to every project.

Our collaborative approach to excellence and innovation are core values at NDY. We consistently deliver best practice sustainable solutions to achieve our clients' objectives.

Clients come to NDY because they want quality. We take ownership and provide clear recommendations while consulting with the utmost integrity.

Most of all, clients come to us because we listen. We look forward to better understanding your business and collaborating with you to achieve successful outcomes.

Our markets

- › Civic
- › Education
- › Health
- › Industrial
- › Mission Critical
- › Offices
- › Residential & Hotels
- › Retail
- › Transport

Our services

- › Acoustics
- › Asset Performance
- › Audio Visual
- › BIM (Building Information Modelling)
- › Communications
- › Controls & Integration
- › Electrical
- › Fire Engineering
- › Fire Protection
- › Hydraulics
- › ICT Consultancy
- › Interiors
- › Mechanical
- › NDYLIGHT (Lighting Design)
- › Property Consultancy
- › Security (including SCEC services)
- › Sustainability
- › Vertical Transportation

Our arts & public buildings **capabilities**

Successful arts and public buildings require an open and inviting building that facilitates pedestrian travel throughout. Attention to detail in mechanical services will facilitate humidity and temperature requirements of museums and galleries, and comfort and flexibility for public buildings.

Significant operational savings and energy efficiency can be achieved by designing systems which are adaptable to specific building requirements. This approach maximises the utilisation of the building whilst minimising the environmental footprint of tight tolerance air conditioning, which typically requires very high airflows and potentially energy intensive simultaneous cooling and heating.

Mechanical services can be cleverly utilised to enhance visitor experience but to achieve a sustainable and best whole-of-life outcome, careful consideration and planning of the mechanical central plant is required. Whilst central plant offers efficiency and capital cost advantages, it is important that connected loads are carefully reviewed to avoid required operation of the central plant 24 hours a day to serve small and remote system loads.

NDY is at the forefront of transforming museum infrastructure to support the latest technology and interactive exhibits. Our process is aligned to the development of highly scalable infrastructure to meet the needs of large visitor numbers.

The public demands seamless integration of communications and audio visual system as part of their visitor experience to any modern public institution. We offer full wireless modelling to enable the mobile device experience to seamlessly provide high bandwidth; supporting mobile video and audio tours. These solutions can also provide indoor way finding with location technology.

NDY's team can bring new and alternative approaches to security which still draw on the principle of layering to optimise the visitor experience whilst achieving the required operational outcomes.

Architectural lighting brings together art and science to achieve visual delight and the complete fulfilment of all technical requirements. By considering all aspects of daylight design, interior, exterior lighting illumination and total site planning, we have the ability to provide designs which maximise the impact of all elements of the project 24 hours a day whilst providing a commercial outcome.

With strong research and development drive, we remain at the forefront of available technologies. Careful selection of the correct equipment in terms of performance and optical quality ensures that the right levels of light are delivered where and when they are required. Suitable control system selection also allows lighting to provide maximum flexibility and energy efficiency, whilst retaining creative, quality design.



Stonehenge Visitors Centre, UK



Queensland State Library

Sustainable **arts & public buildings**

At NDY, sustainability is in our DNA. It's not an 'add-on' but an intrinsic part of everything we do.

We're committed to delivering buildings that contribute to a sustainable future — because we know that sustainability is not only better for our cities and communities, but also for our clients.

NDY is committed to working with clients to achieve truly sustainable building practices. Upgrading existing public buildings to improve their efficiency, and constructing new buildings to meet best practice benchmarks, can deliver exceptional outcomes — from reduced operating costs and higher profit margins, to improved productivity, improved customer experiences and a greater sense of community well-being.

Arts and public buildings form a backdrop to connected cities and communities. As the heart of our communities, such assets warrant lasting efficiency, sustainability and must have an integrated approach to climatic, social and financial change resilience. Infrastructure resilience is a key element to our sustainability philosophy, for buildings and communities alike.

We identify the economic benefit of building facilities in line with disaster mitigation/resilience, as opposed to the responsive/reconstructive model.

These efficiency, productivity and resilience challenges for governments and stakeholders are a field which NDY strive to deliver and lead exceptional outcomes.

Our sustainability team has extensive experience in delivering public facilities for the build environment. Our involvement in public buildings spans across a strong portfolio of performing art centres and theatres, micro-climate studies for public realms, such as the Sydney Convention Centre and the Quay St Cultural Centre.

We have a strong understanding of the key issues and what is important to public building projects and it's stakeholders, and believe it is of high importance to maximise thermal comfort, while preserving efficient energy and capital services infrastructure.



NDY arts and public buildings **project experience**

For more than sixty years NDY has provided consulting engineering services on strategic projects throughout Asia, Australia, Canada, Europe, New Zealand and the UK.

These award-winning projects are testament to the quality of our innovation, expertise and personnel. The following examples of our experience are a snapshot of our ability to deliver world's best practice for master planning projects of all sizes.

To view a comprehensive outline of our project experience visit our website **www.ndy.com**



Visitor Centres

Stonehenge Environmental Improvements Project Wiltshire, England, UK

Services:

- › Architectural Lighting (NDYLIGHT)
- › Acoustics
- › Communications
- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Security
- › Sustainability

About the project:

The Stonehenge Environmental Improvements Project was commissioned to improve the surroundings of the prehistoric monuments located at Stonehenge and to provide a tranquil and informative experience for visitors to the Stones and surrounding area.

NDY designed the building services for a sustainable Visitor Centre with minimal environmental impact. The building services design was tailored to meet the unique requirements of this World Heritage Site of enormous archaeological importance.

Awards:

2016 Civic Trust Awards

- › [Michael Middleton Special Award](#)

› Features and Innovations:

- › A large canopy provides shading to the Visitor Centre in summer while allowing winter sun and year round views out into the landscape.
- › Mixed mode ventilation incorporating heat recovery further reduces the building heating and cooling loads.
- › The reduced heating and cooling loads are met by a renewable energy open loop ground source system providing underfloor heating and cooling. Use of the aquifer water for cooling avoids the capital and ongoing maintenance costs of a chiller - the cool ground water is pumped straight through the underfloor piped system.
- › The same bore hole system provides the potable water for the site, avoiding the below ground disturbance of connecting to the public utilities several kilometres away.
- › All water at the Visitor Centre is recycled and includes a rainwater harvesting system to meet the toilet flushing, irrigation and cleaning water requirements. Potable water demands are further reduced through the use of a vacuum drainage system which in turn minimises below ground disturbance at this archaeologically sensitive site.



National Library of Australia, Galleries Canberra, ACT, Australia

Services:

- › Electrical
- › Fire
- › Mechanical

About the project:

This project involved decommissioning and demolition of the existing ground and adjacent areas, and design of two new larger galleries.

Along with the various technical requirements, NDY carried out detailed design coordination with the project architect, Cunningham Martyn Design, to ensure high ceilings were achieved. The collaborated development of 'service mounting channels' within the galleries further assisted with this design requirement.

NDY was also engaged in an active review role as the client advocate during the construction phase to ensure the design intent was appropriately captured by the installation team.

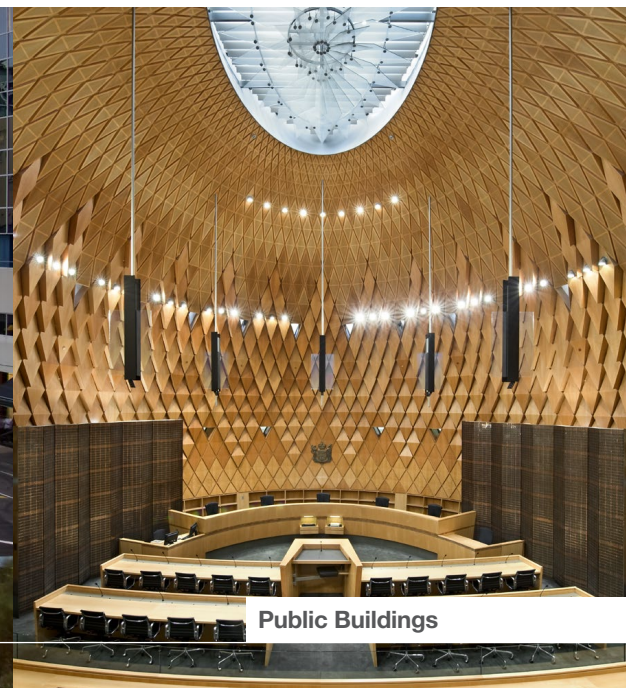
Features and Innovations:

- › Dedicated tight tolerance temperature and humidity control air-handling plant for each gallery. The existing chilled water and heating hot water infrastructure required re-configuration to accommodate the new galleries and new supplementary chilled water and heating infrastructure were provided to incorporate a level of redundancy.
- › The electrical services design included coordination with specialist lighting designers to provide appropriate infrastructure. Power and communication reticulation was appropriately coordinated to be sympathetic to the visual appeal of the proposed gallery.
- › The fire services, along with re-configuration of the existing services included provision of new VESDA system.

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Services were appropriately designed and coordinated to be sympathetic to the visual appeal of the proposed gallery.

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Supreme Court Wellington, Wellington, New Zealand

Services:

- › Communications
- › Electrical
- › Hydraulics
- › Mechanical
- › Security

About the project:

This project required a sensitive renovation of the existing heritage High Court building combined with the provision of a state-of-the-art new Supreme Court building.

The design brief required tailored solutions that optimised the internal environmental quality, occupant comfort and energy signature of the building.

Features and Innovations:

- › The HVAC system was designed to accommodate the highly variable occupancy and usage patterns anticipated throughout the building. Displacement ventilation was chosen for the large public spaces to provide high-quality internal conditions with minimal energy consumption.
- › Solar panels provide water heating for the complex. In addition, the building fabric and external bronze screen provide a high-performance thermal envelope that limits solar gain, reduces heat loss and acts as a security threshold.
- › NDY undertook computer based energy modelling and lighting simulation of the building to optimise the fabric performance and the artificial lighting design whilst allowing good views and daylight penetration to be achieved architecturally.
- › Courtroom lighting was arranged to provide high levels of illumination at the Judges bench for television broadcasting and video conferencing purposes.

“

The design brief required tailored solutions that optimised the internal environmental quality, occupant comfort and energy signature of the building.

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Civic, Australia

QPAC Stage 7 - New Performing Arts Venue, South Bank, Brisbane, Queensland

Services

- › Communications
- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Security
- › Vertical Transportation

About the project

In May 2018, the Queensland Government, together with QPAC, announced their commitment to deliver a new \$150 million theatre on the Playhouse Green site in the South Bank of the Brisbane River. The New Performing Arts Venue (NPAV) will house a brand new 1,500-seat theatre to meet audience and producer demand, supporting the continued development of performing arts in Queensland. This world-class facility provides an extra 260 performances per year, allowing the venue to host an additional 300,000 visitors annually.

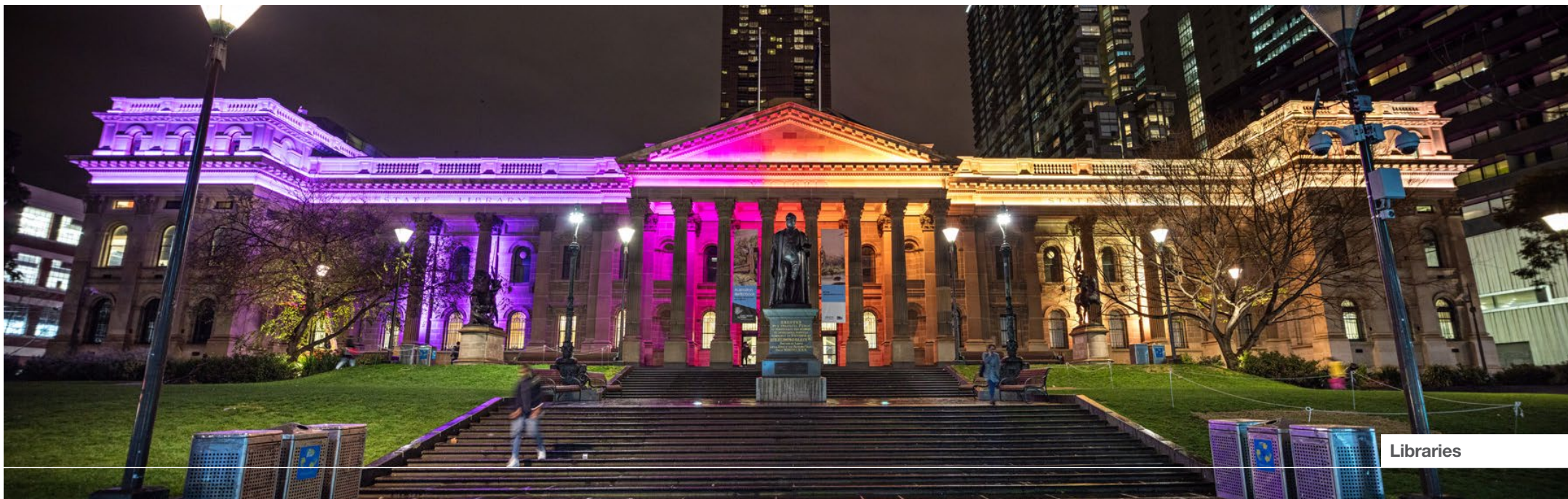
NDY was initially engaged by architect Blight Rayner to provide design services and to assist in their international design competition submission. Managing contractor Lendlease also commissioned NDY to provide engineering design solutions to the new venue, noting that the design had to account

for flood levels to mitigate any potential damage from future flooding.

Aside from meeting the unique terms of the architect's design aesthetic, which had a detailed curved glass façade, there was also a need to comply with the Heritage Council due to the main complex being on the Queensland Heritage Register. The constrained building site was adjacent to a heritage precinct. The proposed design required innovative engineering solutions that should properly integrate with the state-of-the-art architectural and structural design, including CFD modelling to prove the air conditioning system's performance. Through a collaborative approach with the structural engineers and architect, NDY was able to overcome these key considerations by coordinating with all the stakeholders to achieve successful outcomes.

To improve the space, NDY designed building systems for changing spaces, which provided flexibility and allowed a broad range of performances. One example would be the lobby spaces' lighting and ventilation systems that will be designed in a manner that enables themed entries with high levels of fresh air. To minimise the impact on the architectural aesthetic, NDY ensured that all building services were concealed.

NPAV is one of the most anticipated developments to be built in Queensland and will become part of the largest performing arts centre in Australia. NDY's contributions to the project were well commended by the client due to the long-term impact that their solutions provide to the new venue.



Libraries

State Library Of Victoria Refurbishment, Melbourne, VIC, Australia

Services:

- › Architectural Lighting (NDYLIGHT)
- › Communications
- › Electrical
- › Hydraulics
- › Mechanical
- › Vertical Transportation

About the project:

The redevelopment of the State Library of Victoria involved new building works and a major refurbishment of existing buildings.

The redevelopment encompasses the North and South infill buildings for book stack storage, refurbishment of the historic Dome Building, Queens Halls, McCoy McArthur and Swinburne Galleria, the Main Entrance including Palmer and Monash Halls, Latrobe and McAllan buildings and the transformation of the Northern and Southern Courtyards into public usable space.

During the course of the project, the Library's Building Project Office has overseen relocation of over 70kms of collections, 270 staff and all major Library services points with the provision of nearly \$2 million worth of storage.

Features and Innovations:

- › Greatly increased public service areas.
- › Improved service delivery capabilities.
- › Technological advances in the provision of information services.
- › Improved working conditions for Library staff.
- › Creation of new and exciting display spaces of the Library's collections and temporary exhibitions.
- › Specialised storage for valuable, often unique, collections.

“

NDY's consulting services to the library have spanned over two decades.

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Museums

Victoria & Albert Museum, South Kensington, England

Services:

- › Mechanical

About the project:

NDY was appointed as framework consultants to the Victoria & Albert Museum, colloquially known as 'The V&A'. The V&A is like a 'mini city' spread over a 12.5 acre estate, with the major campus in South Kensington, London. It comprises a wide range of buildings some of which date back to the mid-19th century.

The museum recently embarked on a 10 year, £150m upgrade programme. NDY's role involves an array of projects, each having to be carefully integrated within the complex of listed and heritage buildings.

Features and Innovations:

- › Owing to the nature of the building and its high numbers of visitors, all refurbishments were carried out whilst the building was occupied. Given NDY's prior experience with such projects, we were aware of noise generation, fire strategy and evacuation procedures.

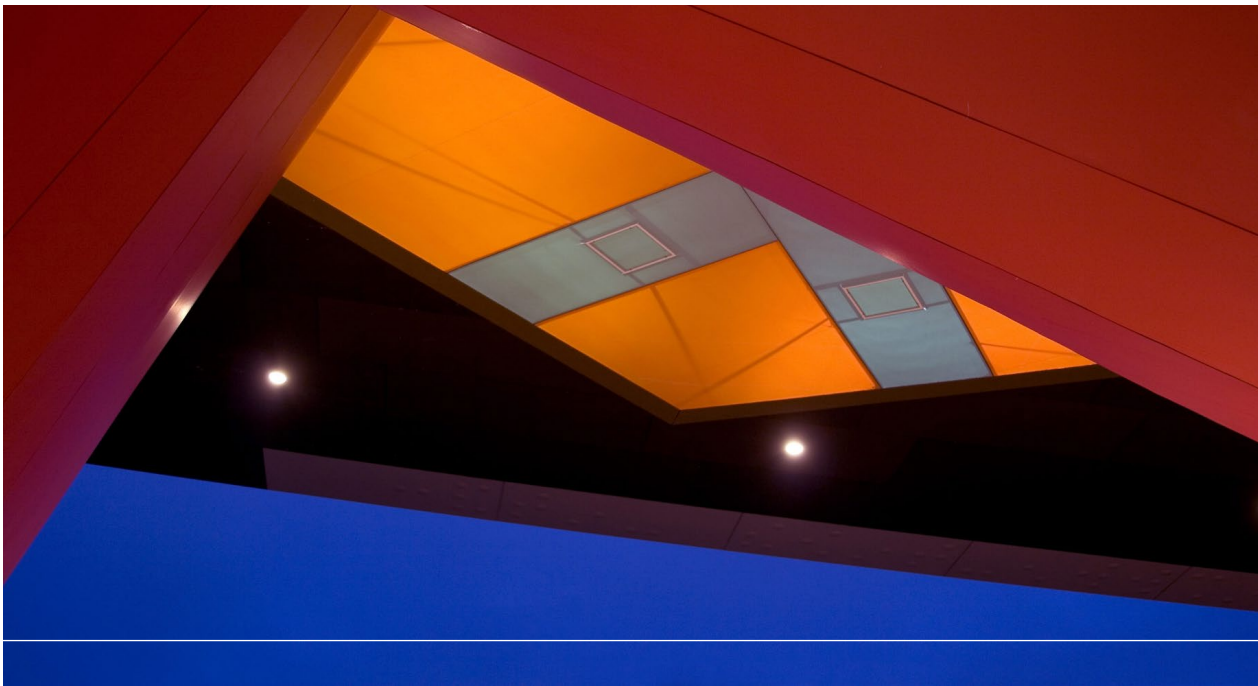
NDY's completed projects at the V&A include:

- › Series of new Paintings Galleries featuring (among others) the works of John Constable
- › Transformation of the Gilbert Bayes Sculpture Gallery
- › Upgrading of the Miniatures Gallery
- › Sacred Silver & Stained Glass Gallery
- › Modernisation of the Jewellery Gallery, which houses the V&A's most expensive collection
- › Refurbishment of the Ceramics Gallery, an unrivalled international collection of pottery.

“

NDY's role involves an array of projects, each having to be carefully integrated within the complex of listed and heritage buildings.

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National Museum of Australia, North Gallery Mezzanine Canberra, ACT, Australia

Services:

- › Electrical
- › Fire
- › Mechanical

About the project:

The National Museum of Australia engaged NDY to carry out the mechanical, electrical and fire services design for the North Gallery Mezzanine fitout.

Working closely with specialist museum architects Cunningham Martyn Design, NDY provided innovative design solutions for power and fire services reticulation.

The solution utilised the existing floor access and junction points built into the new exhibition cabinet bases, to reticulate services without the need for unsightly umbilical cords or excessive coring and chasing of the mezzanine slab.

Features and Innovations:

- › Base lighting was designed to minimize reworking of the existing infrastructure, and the majority of the feature lighting was able to utilise the extensive track system of the original installation, minimising costs while achieving maximum effect.
- › Works to the gallery also included fire services to a new pergola structure on the mezzanine floor. Using the existing cast-in points, plus installing new flow switches and reporting, enabled the pipework to cross the fire zone from below without compromising the integrity of the fire engineering solution. Supplying the structure from below avoided unsightly columns or droppers from the ceiling above, and maintained the original open space concept of the museum design.
- › Mechanical works were implemented without compromising the original design intent and function of the space.
- › NDY Fire Engineering carried out a review of the Museum Evacuation strategy to enable the removal of a stair from the Permanent North Gallery.
- › The Australian Journeys Gallery project is an example of site specific knowledge, and close liaison with the client and design team enabling difficult engineering problems to be resolved.



Cultural Centres

Unitec Wharekai, Auckland, New Zealand

Services:

- › Acoustics
- › Communications/ICT
- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical

About the project:

The Wharekai makes an important statement about the importance Maori culture plays in a Unitec education. The project is located at the heart of the Unitec Institute of Technology Campus, and its orientation toward the “Manuhiri” (visitors) arriving on the Unitec Campus ensures that Unitec presents itself as a “post-colonial” tertiary institution that places significant value on the central role of Maori culture.

Careful attention was paid to the building services to ensure they met all regulations and integrated harmoniously with the vision of project. NDY worked closely with the client and the design team to achieve the common goal.

Features and Innovations:

- › NDY’s functional and innovative solutions contributed to the successful Wharekai at Unitec winning best in category of the 2013 Warren and Mahoney Special Purpose Property Award.
- › NDY carried out Computational Fluid Dynamics analysis during the preliminary design phase to establish appropriate openings and orientations to enable a sustainable solution to be pursued.
- › Specialist lighting was designed to highlight architectural and structural elements of the building. The space incorporated lighting controls and AV system to further enhance the space for a variety of uses.
- › Green building initiatives incorporated in designing the Wharekai included daylight harvesting; lighting controls; natural ventilation (automated windows); water efficiency; cyclist facilities; and BMS data collection and monitoring.

“

One of the main challenges was to utilise/relocate the existing infrastructure whilst extending it to meet the education requirements of Unitec.

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Queensland Museum and Science Centre Brisbane, QLD, Australia

Services:

- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Security
- › Vertical Transportation

About the project:

The new Science Centre and front entrance to the Queensland Museum South Bank is the first major facelift for the Museum in almost 20 years.

The new Science Centre, which was previously based in Brisbane's George Street, features 96 interactive exhibits throughout three galleries featuring distinct themes: Body Zone, Earth Space and Action Stations. The new glass entry provides the public with a window into the Museum as well as more visible access to the Museum and the new Science Centre.

NDY was involved with the striking new entrance to the Museum, the new Cultural Centre Bus Station and floodlighting of the public art.

Features and Innovations:

- › The project involved detailed staging of works as the existing back-of-house areas had to initially be relocated from level one to other refurbished areas within the Museum to provide space for the new Science Centre.
- › NDY worked closely with architect Robin Gibson to create a facility that would capture the imagination of young people by spreading the message about science and technology.
- › The Museum remained open to the public during all works.

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The new glass entry provides the public with a window into the Museum as well as more visible access to the Museum and the new Science Centre.

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Brisbane Magistrates Court Brisbane, QLD, Australia

Services:

- › Communications
- › Electrical
- › Energy Modelling
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Security
- › Vertical Transportation

About the project:

The Brisbane Magistrates Court complex consists of two basements, ground floor and 10 storeys. It has space for 35 courts, hearing rooms, coroners courts, judges' chambers, law library, court support facilities, prisoner facilities, state penalties enforcement registry, alternative dispute resolution unit, and administration offices.

Reducing the environmental footprint of the Brisbane Magistrates Court was a priority from the early stages through to the final fitout. The building's orientation, material use and design all optimise local climatic conditions and reduce environmental impacts and energy use.

Features and Innovations:

- › The building design addresses and minimises the impact of direct sunlight in occupied areas on users and air-conditioning loads. Extensive use of passive sun control and low-energy glass and solar collectors preheat the building's hot water.
- › The efficient facade solution was achieved through extensive thermal and energy modelling of the project, allowing optimisation of the facade design.
- › Sustainability features include rainwater harvesting and roof-fitted solar power cells for water heating. Mixed mode and CFC-free air-conditioning systems allow natural ventilation.
- › Sub-metering devices are fitted to monitor all water and electricity use. Monitor sensors switch off lighting and turn down air-conditioning when rooms are unoccupied.



Reducing the environmental footprint of the Brisbane Magistrates Court was a priority from the early stages through to the final fitout.





Museum of New Zealand – Te Papa Wellington, New Zealand

Services:

- › Automation
- › Communications
- › Electrical
- › Fire Protection
- › Security
- › Vertical Transportation

About the project:

NDY were an integral part of the design team responsible for building services at the Museum of New Zealand, Wellington.

The building expresses the total culture of New Zealand, in particular the bi-cultural nature of the country, and recognises the significance of its tradition and heritage. NDY worked closely with the Project Managers, the Architect and the Museum of New Zealand Project Office to achieve this important cultural outcome.

Features and Innovations:

- › The building includes 23 different exhibition stages with flexible exhibition partitions and display arrangements.
- › Innovative solutions were developed for the 'safe' illumination of artifacts within the display cases using graphics label rails illuminated by an integrated neon system and fibre optic lighting systems.

“

The building expresses the total culture of New Zealand, in particular the bi-cultural nature of the country, and recognises the significance of its tradition and heritage.

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Qantas Heritage Collection Sydney, NSW, Australia

Services:

- › Architectural Lighting (NDYLIGHT)
- › Fire Services
- › Mechanical

About the project:

Qantas commissioned NDY to carry out the building services and specialty lighting design for this exciting and challenging project. The project involved the design of a permanent exhibition space to showcase memorabilia, archived material and the brand's history recorded and collected since Qantas launched in 1920.

Aptly named The Qantas Heritage Collection, the 1,000 sq m site located on the mezzanine level of the Qantas Sydney Domestic Terminal (T3) officially opened its doors to the public in mid 2006. The project was a creative challenge for all of the design team.

Features and Innovations:

- › Specialty lighting design that complemented the high ceilings, natural light and the various displays within the collection. The design incorporates features which permit the curators to adapt lighting levels to suit ongoing display changes.
- › Complex mechanical services design issues, including significant change in use of the space (area originally designed as an office accommodation). The design also permits Qantas to use the Museum space for functions and events.
- › Complex fire services design changes including significant changes to mechanical smoke exhaust system and enhancement to the fire protection and detection systems to meet the Fire Safety Performance Solution requirements.

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NDY demonstrated its excellence in consulting by providing solutions that complemented the project's aims and objectives.

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Jewish Community Centre For London, London, England

Services:

- › Communications
- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Security
- › Ratings

About the project:

The Jewish Community Centre provides a broad range of cultural services to London's Jewish community and those interested in Jewish culture. The new JCC building is located to the north of Central London in Finchley Road and provides a home for this organisation. Facilities being provided include:

- › Multi-purpose performance space
- › Film screening venue
- › Public foyer and social spaces
- › Cafe/Restaurant/Bar areas
- › Dance studios
- › Educational facilities
- › Nursery facilities
- › Administrative offices.

This complex conglomeration of community facilities has been incorporated within a four storey pavilion building with an external public piazza space. Also included are 14 residential units within a separate linked building.

Features and Innovations:

- › In keeping with the client's brief to achieve exemplary credentials in sustainability, the design developed by NDY achieved BREEAM Excellent for the Pavilion and Code for Sustainable Homes level 4 for the residential unit.
- › The services solutions were varied to suit the specific needs of the various spaces and included mechanical comfort cooling to the multi-purpose spaces and screening rooms, with natural ventilation and mixed mode solutions for other areas.
- › Photovoltaic energy and solar hot water provision was also incorporated to assist in reducing energy consumption and carbon emission reduction.

“

...the design developed by NDY achieved BREEAM Excellent for the Pavilion and Code for Sustainable Homes level 4 for the residential unit.

”



Museums

Australian War Memorial – Anzac Hall, Canberra, ACT, Australia

Services:

- › Electrical
- › Mechanical

About the project:

Fifty six years after the Australian War Memorial was first founded, major redevelopment was undertaken to upgrade the Memorial to reflect modern museum practice and to maintain the Memorial standing as one of the world's greatest museums.

The first stage involved a complete rebuild of the WWII gallery, the Orientation gallery, and Bradbury Aircraft Hall. Following the first refurbishment, the new Anzac Hall was constructed with a grant of \$12 million from the Federal Government's Centenary of Federation Fund. With 3,000 sq m of new exhibition space, it houses many larger items in the collection, including the Lancaster bomber and the Japanese midget submarine that entered Sydney Harbour in 1942.

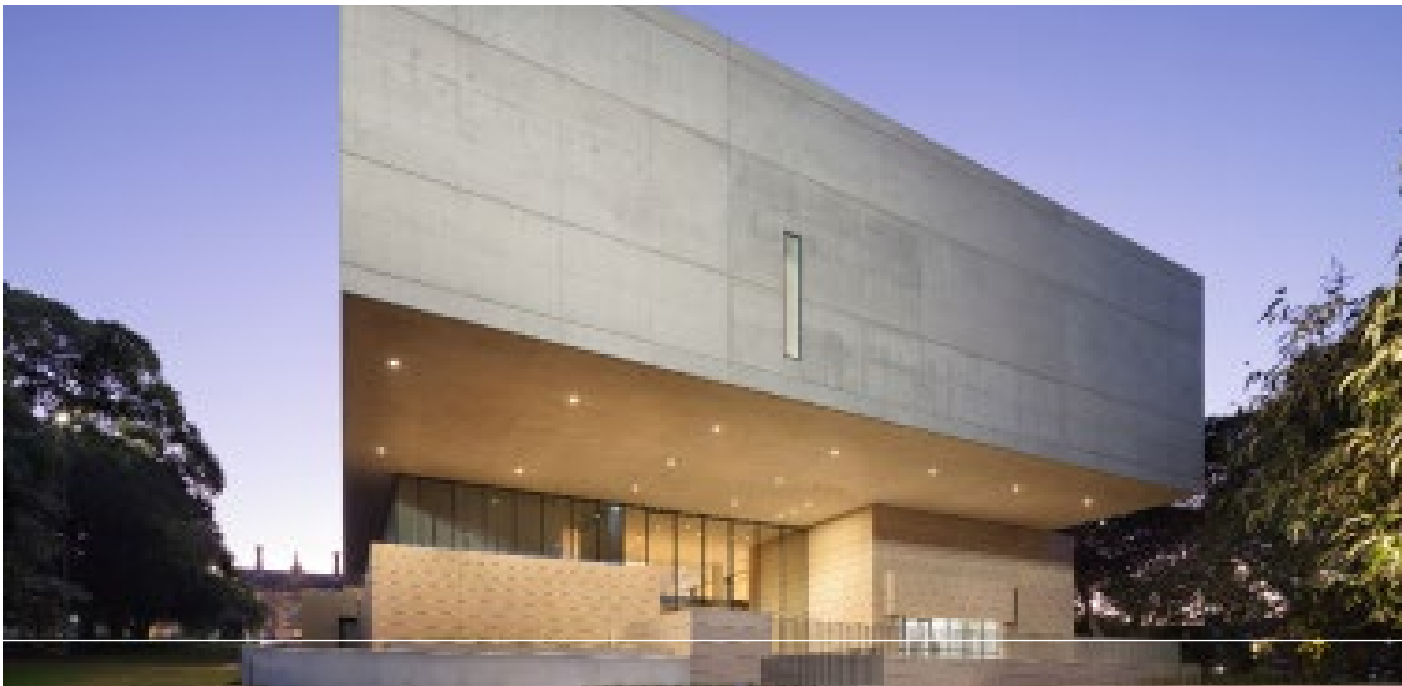
Features and Innovations:

- › The brief required a high standard of finish throughout with unprecedented quality control rigidly enforced during the construction period.
- › Flexibility in the design and selection of equipment was essential in order to accommodate changes and expansion.

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Flexibility in the design and selection of equipment was essential in order to accommodate changes and expansion.

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Civic / Education, Australia

Chau Chak Wing Museum Sydney, New South Wales, Australia

Services

- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Sustainability
- › Vertical Transportation

About the project

The Chau Chak Wing Museum is a striking building located at the gateway to the University of Sydney. The world class gallery spaces will significantly expand the University's current display space and for the first time, allow the hosting of major travelling exhibitions from first class international and national collections.

Housing an impressive cultural collection of over 443,900 items of great cultural, artistic, scientific and historical importance, it represents a major contribution to Australia's arts and cultural landscape. The museum takes its name from the Chinese-Australian philanthropist and entrepreneur Dr. Chau Chak Wing, whose generosity supports the exhibition, preservation and fortification of this significant body of work.

On behalf of the University, NDY provided detailed, in-depth peer reviews of the project, ensuring that the D&C contractor was compliant with the University's standards, previous concept design, industry design guides for critical museum spaces and Australian Building Standards.

As the building includes critical ASHRAE 'A' and 'AA' rated spaces for which maintenance of space conditions is crucial for the storage and presentation of priceless artifacts, extremely close attention to the mechanical engineering systems including consideration of mechanical plant arrangements, redundancy and control methodology was a focus of our role. NDY worked closely with the Independent Commissioning Agent to ensure robust testing and commissioning plans were developed.

NDY worked collaboratively with the design team and university to navigate alternative arrangements proposed by the contractors, with a high level of communication, transparency, flexibility in considering compliance with the brief and the ability to put complex engineering decisions in layman's terms, assisting the project management team in assessing the changes.

The outcome ensures the safety of the artworks in the Chau Chak Wing Museum and invites the university and wider community to enjoy the collection in their modern and impressive new home for generations to come.

Client: University of Sydney
Architect: Johnson Pilton Walker (JPW)
Project Value: \$68m

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For over 60 years, we have been
at the forefront of innovation.

We recognise that both clients
and projects are unique, and we are
adept at tailoring our services and
designs to suit project requirements.



Stuart Fowler

CEO
Norman Disney & Young

”

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