

Norman Disney&

YOUNG A TETRA TECH COMPANY

**Capability Statement** 

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# Introduction

Established in 1959, Norman Disney Young (NDY) has a long and proud history of offering an extensive range of engineering services and delivering award-winning world-class projects.

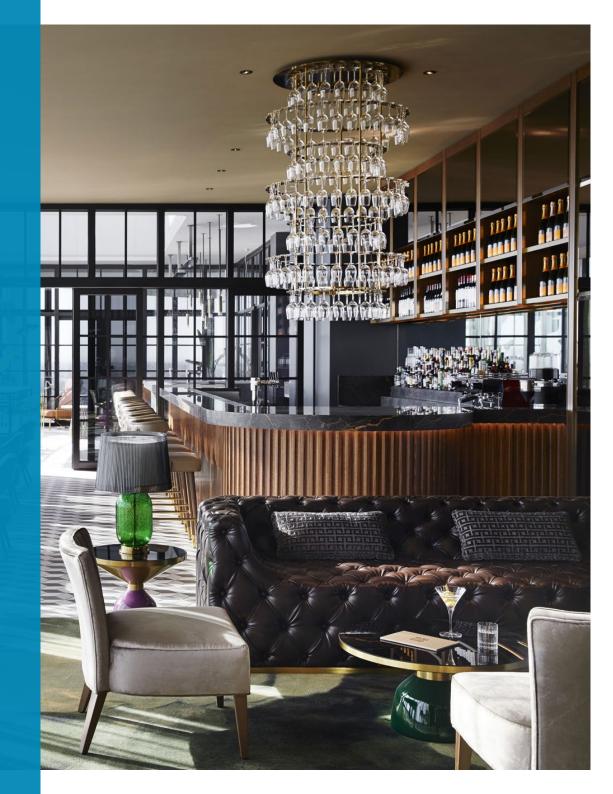
NDY's hotel experience stretches across many markets. We understand the sector and have the skills needed to meet client demands.

All hotels require a first class level of service. NDY's broad range of engineering services and specialist design skills have been utilised in Asia, Australia, Canada, Europe, Middle East, New Zealand and the UK. Projects range from new constructions to major refurbishments of heritage buildings.

Our multi disciplinary approach and ability to work in close collaboration with architects, builders and other contractors is paramount to our success in servicing the hotel sector.

With international experience and a network of offices across five countries, NDY is in a privileged position to provide engineering excellence to your project.

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.

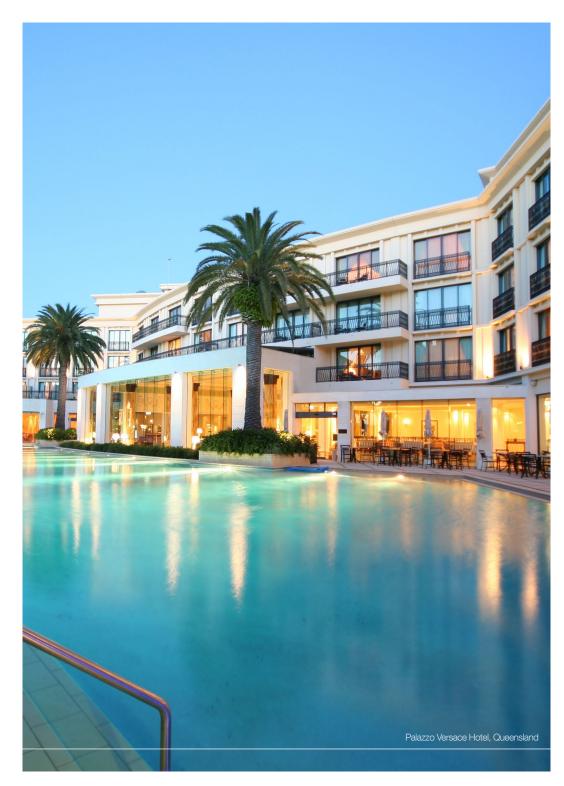
To sustain deep and trusting relationships with our clients, through solving their problems and serving them with utmost reliability,

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** 



# 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
- Sustainability
- Vertical Transportation

Hotels Capability Statement **05** 

# Our hotel **capabilities**

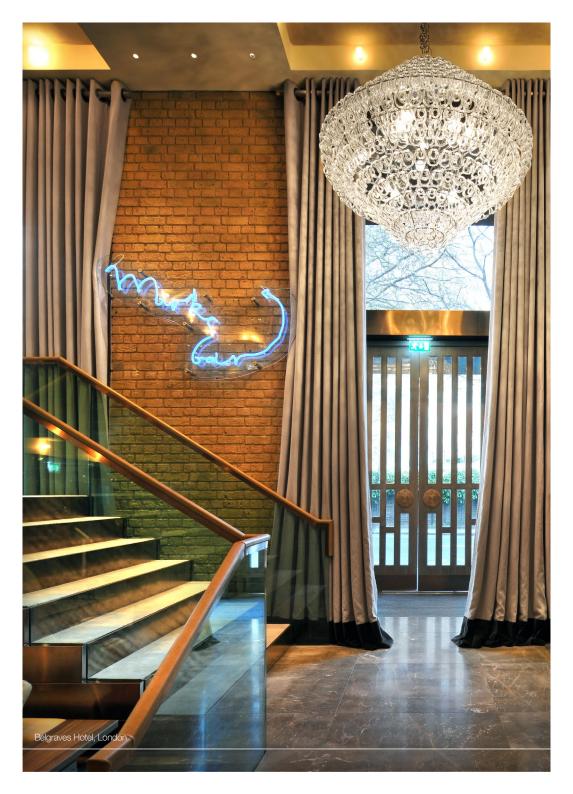
NDY's hotel experience spans many locations and markets. We understand the exacting requirements of clientele in this sector and match these expectations with the skills essential to provide a hotel that satisfies both guest and operator.

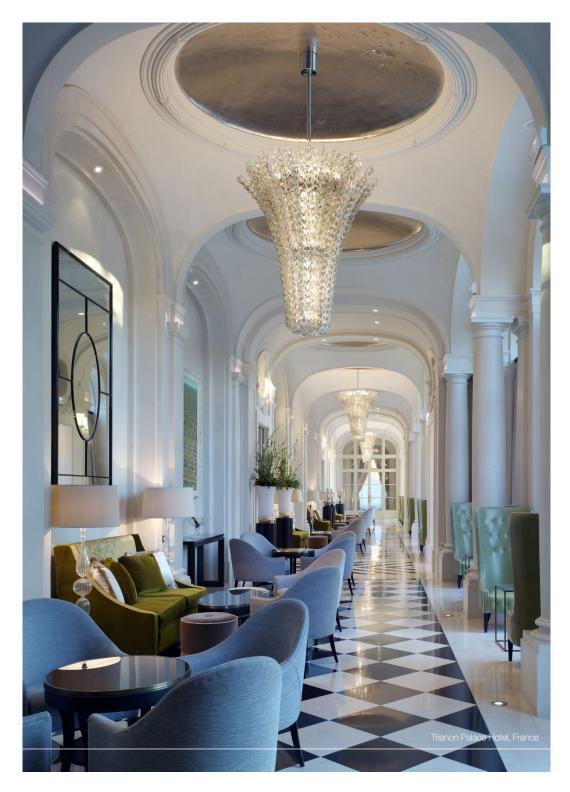
Our market leading expertise in services engineering and BIM create innovative, energy efficient, safe and functional hotels. With additional specialist expertise including Interiors, Acoustics, Automation and Fire Engineering, we provide complete solutions for your next hotel project.

## Key considerations for hotels include:

- Acoustic considerations for bedrooms and function areas such as conferencing, restaurant and bars
- Air quality & noise reduction for bedrooms
- High efficiency & fast response domestic hot water
- Odour control from food preparation areas
- Space effective riser design and services distribution
- Metering strategy to monitor individual costs or separate tenants or operators

- Guest entertainment, including IPTV & VoD
- Coordination and collaboration with Architects and Interior Designers
- Communications including WiFi, telephony, mobile phone coverage and high speed broadband
- Hotel locking, CCTV and security systems
- > Energy efficiency initiatives and carbon dioxide reduction
- > Continuing operation, for refurbishments.





# Sustainable **hotels**

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

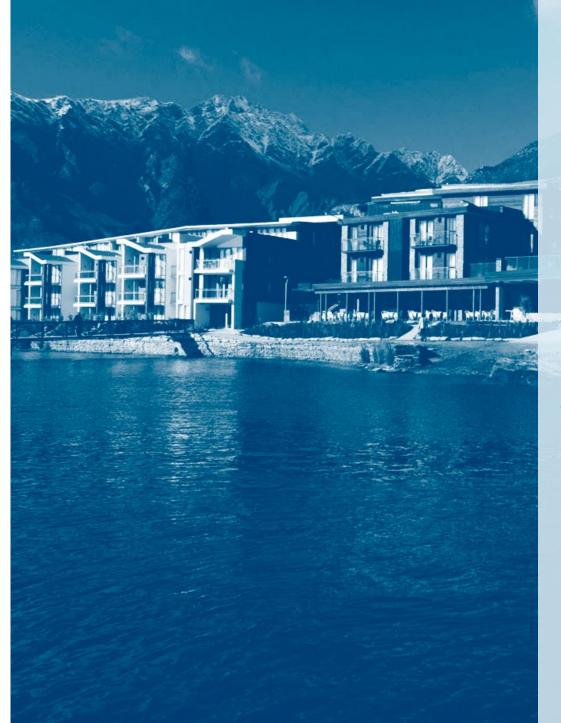
We're committed to delivering buildings that contribute to a sustainable future – because we know that sustainability is not only better for our cities and communities, but also for our clients.

At NDY, we practice what we preach. We have attained global ISO14001 accreditation, we report annually on our own corporate sustainability initiatives through the Global Reporting Initiative (GRI) framework, and our Australian offices are either certified or registered for Green Star and NABERS ratings.

We are committed to working with the accommodation industry to achieve truly sustainable practices. Leading hoteliers understand that sustainable tourism is compatible with high levels of service, and recognise that sustainable buildings can deliver spectacular results – from reduced operating costs and higher profit margins, to improved staff productivity and happier guests. Hoteliers know that they can differentiate their accommodation and their service by embedding sustainability in what they do.

Our team has extensive experience delivering a wide range of projects, and can help hotel operators to achieve significant financial savings by addressing building operations issues – from energy and emissions minimisation to water conservation, and from waste management to noise reduction.

We create high-quality indoor environments using sustainable design and smart technology, to ensure the comfort and satisfaction of both guests and staff. And we identify and capture operational efficiencies so that hotels spend less money on energy and water costs – leaving more money to spend on creating a memorable brand experience for customers.



# NDY hotels 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** 



## The $\operatorname{Ned}$ London, UK

#### Services:

- Communications
- Electrical
- Energy Modelling
- > Hydraulics
- Mechanical
- > Security
- Sustainability/ESD

### About the project:

- Converting the former Midlands Bank building into an upmarket hotel was a daunting task, particularly as the building had been empty for a decade.
- NDY provided designs for the Mechanical, Electrical & Public Health (MEPH), security and communications services.
- These solutions required careful planning of plant areas and service routes, for such as heating, cooling, electrical fire, public health services, cables, data lines and ventilation infrastructure to ensure that the heritage listed features of the interior, whilst creating a space still capable of providing comfort and supporting a luxurious environment.

#### Features and Innovations:

- Minimal visual disruption of heritage decor
- Preservation of irreplaceable fixtures, such as vent covers and lighting
- Minimal penetrations in vault area, now
- > converted to a members club. This
- saved time, cost and ensured that a
- maximum amount of the internal
- > surfaces could be exposed
- > Lower costs for environmental control
- > without compromising comfort.

"Providing a sound plan for integrating modern services into a heritage listed building required careful planning but the results are nothing short of spectacular."



## $Collins Arch-447 \ Collins \ St \ \textbf{Melbourne, VIC}$

#### Services:

- Commissioning Management
- Fire Engineering
- > Hydraulics
- Mechanical
- > Vertical Transportation.

#### About the project:

The Collins Arch mixed use development encompasses an entire city block site bounded by Collins Street, William Street, Market Street and Flinders Lane.

Developed by Cbus Property, this unique and landmark project is the last CBD "island development site" bounded by wide streets and heritage buildings. It provides significant publicly accessible open space, adding to the character of the neighbourhood, and the local community.

A key feature of the project is the luxurious 5+ Star Hotel with 292 rooms, hotel wellness centre with heated pool, hotel functions rooms, auditorium and unparalleled view of the Melbourne skyline. The rest of the structure features 50,000sqm of PCA premium grade commercial office space, 202 luxury residential apartments, basement parking for 500 cars, and a vibrant ground floor retail offering befitting of its unique location.

Building amenities include first class end of trip facilities, residents wellness centre with private heated pool, and a residents skygarden at the highest level.

Woods Bagot and SHoP Architects (US) collaborated on the design which befits the site and location, demonstrating a true interrelationship of each use, world leading sustainable design, and a commitment enabling tenants to provide WELL Standard premises for all occupants, including staff. Our role encompassed the mechanical, hydraulics and vertical transportation design, developing a specialist fire engineering solution, and commissioning management advisory.



## Shangri-La Hotel Vancouver, CAN

#### Services:

#### About the project:

- Energy modelling
- Mechanical
- Plumbing
- Sustainability
- Supporting O&M

NDY's previous successful projects and experience in high-rise residential and hotel

markets, were key factors in Westbank Group's decision to engage NDY to design the luxury hotel Shangri-La in Vancouver, BC. building.

The high-rise building's first half is made up of a five-star hotel, whilst the top half is home to luxury residential units. The 62-storey Shangri-La is currently the tallest building in British Columbia and in addition to the hotel and residential spaces, there is also a grocery, two restaurants and a high-end retail rental unit in the building including eight levels of underground car park.

During the design phase of the project, a primary challenge was the height of the building. The vertical column pressure on the plumbing systems tended to increase, which made the team divide the building into two different mechanical sections; this is a unique scenario.

After completion of construction, NDY continued to provide support to the owner/building operators by designing tenant fit outs and support operation and maintenance of the base

A unique aspect in the project was the series of installed boreholes called a ground condenser located underneath the building, essentially for thermal storage. The ground-source heat pump loop sends the heat into the ground during summer, which could be reused during winter for space heating and domestic hot water heating. The ground condenser is an innovative alternative to solar panels; solar panels are not too effective in Vancouver due to the weather.

Aside from NDY, the visionaries behind the project is Westbank as the developer as well as James K.M. Cheng Architects who assisted in making this project possible.

There is a significant amount of carbon reduction and greenhouse gas reduction as the building can store thermal energy from cooling to heating seasons, while also saving on energy costs.



## KLCC Convention Centre Hotel Kuala Lumpur, Malaysia

#### Services:

- Architectural lighting (NDYLIGHT)
- Electrical
- > Fire protection
- Hydraulics
- Mechanical
- Vertical transportation

#### About the project:

The KLCC Convention Centre Hotel is a 600 room Traders Business Hotel located above the KLCC Convention Centre in Kuala Lumpur, Malaysia. The hotel design team was separately engaged to the construction team; this raised a number of unique design and coordination challenges.

#### Features and Innovations:

- Coordination with the Convention Centre which was already largely designed prior to our appointment
- > Extending site infrastructure to the hotel site through the Convention Centre structure
- Coordination of in ground services with existing services and the Convention Centre structure
- Merging best practice Australian design and Malaysian design construction methods.

The hotel design team was separately engaged to the construction team; this raised a number of unique design and coordination challenges.



## Hotel Chadstone, Melbourne, Australia

#### Services:

#### About the project:

- Acoustics
- Communications
- Electrical
- > Fire protection
- Mechanical
- Security
- Vertical transportation

Working alongside leading Australian architects Bates Smart, Norman Disney & Young were engaged by Vicinity Centres to undertake the design, documentation, tender and contract review of the new \$130 million Hotel Chadstone.

Australia's largest hotel operator, AccorHotels, will manage the 250-room luxury hotel under its MGallery by Sofitel brand, helping to again elevate Chadstone as a world-class integrated lifestyle destination bringing together retail, dining, entertainment, business, tourism and now accommodation. The hotel will provide accommodation and services to complement the iconic Chadstone Shopping Centre and Tower One offices situated within the precinct.

The 12-level hotel features 250 guest suites, and boasts market-leading features, including health and wellness facilities, a day spa, gymnasium

and indoor, rooftop swimming pool, plus two restaurants, lounge bar, and a ballroom. Integrating these facilities into the hotel structure proved a challenge to all services, particularly for acoustic isolation, ensuring that guests could enjoy the recreational spaces without impacting on the ambience of the hotel suites.

The communications network architecture for the building is comprised of an advanced network infrastructure, supporting the needs of guests who require a robust communications solution for business or entertainment. A key feature is the implementation of a passive optical network (PON), a fibre optic system that reduces the need for copper in the system (which has higher maintenance requirements than fibre optics), while providing a backbone to the communications system that will be compatible with current and emerging technologies.

Once certified by the Green Building Council of Australia. Hotel Chadstone will be the first 5-star Australian hotel to receive a 5 Star Green Star Design & As Built rating.

## The 12-level hotel features 250 guest suites.



## Belgraves Hotel Belgravia, London

#### Services:

- Acoustics
- Audio visual
- · Communications/ICT
- > Electrical
- Hydraulics
- Mechanical

#### About the project:

ground/first floor level.

Norman Disney & Young were appointed for the complete refurbishment of this hotel, located in the heart of Belgravia, one of London's most prestigious suburbs.

to a five star standard. The guest accommodation

is located over eight storeys (levels 2 to 10) with

public areas including an external terrace area at

The hotel provides over 80 guest rooms, meeting rooms, leisure and restaurant facilities

- Features and Innovations:
- Key to NDY's involvement was the replacement of the existing services with new systems offering much higher levels of energy efficiency
- Riser design was optimised to reduce loss of valuable floor area
- Careful coordination of the services solution with the fabric achieved a discreet but readily maintainable installation.

The hotel provides over 80 guest rooms, meeting rooms, leisure and restaurant facilities to a five star standard.



## Ritz Carlton Hotel and Limestone House Apartments Dubai, UAE

#### Services:

#### Electrical

- > Fire engineering
- Hydraulics
- Mechanical
- Vertical transportation

#### About the project:

NDY completed the scheme design for this major luxury hotel and apartment complex, located within the newly developed Dubai International Financial Centre precinct.

The development by Union Properties covers an entire city block and features an array of highly specified spaces, including 350 five star hotel rooms, approximately 450 luxury apartments, two ballrooms, three restaurants, a spa facility and a variety of other public spaces

#### Features and Innovations:

The breadth of specialist services offered by the NDY Group has allowed a truly multi-disciplinary service to be delivered in close collaboration with international architects Gensler and structural engineers Hyder. This dramatic addition to the Dubai International Financial Centre has been developed to meet Ritz Carlton's exacting international design standards.

The development by Union Properties covers an entire city block and features an array of highly specified spaces.



## Kawarau Falls Station Queenstown, New Zealand

#### Services:

- Acoustics
- Communications
- Electrical
- > Fire protection
- Hydraulics
- Mechanical
- Security
- > Vertical transportation

#### About the project:

Kawarau Falls Station (KFS) is a complex of residential and hotel buildings located on the Southern shore of the Frankton arm of Queenstown's Lake Wakatipu. Whilst Queenstown has a resident population of just 20,000, it welcomes more than 2 million tourists each year.

The KFS development consists of four primary buildings: Reserve North, Kingston West, Reserve South & Central, and Lakeside West. NDY was an integral part of the design team for the KFS development commencing with the initial site-wide services investigations and concept designs. With the exception of Lakeside West, NDY also completed the building services for the entire development.

#### **Features and Innovations:**

The method of heat rejection for the air conditioning system is by the use of geothermal energy in the form of water from Lake Wakatipu on a once-through, open circuit basis. The heat rejection system is characterised by very low noise levels and an absence of cooling tower plumes which are important considerations in this eco-tourism part of NZ. NDY also eliminated the unsightly external infrastructure associated with conventional air-cooled condensor systems, again being sympathetic to the serenity of the surrounding area.

NDY achieved high quality success solutions for the KFS development with low capital cost. This success has been achieved through assured quality and attention to detail in the design stage by a professional and experienced team of engineers who are both innovative and practical.

NDY was an integral part of the design team for the KFS development commencing with the initial site-wide services investigations and concept designs.



## Courtyard by Marriott - Oxford, Oxford

#### Services

#### About the project

- > Public Health
- Mechanical
- Electrical
- Fire Protection
- Vertical Transportation

### bout the project

Norman Disney & Young were engaged by Dominvs Group for this new build, 4-star Marriott hotel development to act as their 'client side' compliance monitoring representatives. This hotel scheme within the heart of Oxford

comprises 150 guest rooms over six storey's within the centre of Oxford with a restaurant, deli and roof terrace Dominvs adopt a design and build approach to their procurement strategy and they employed NDY for the later stages of this project to act as the "clients checking engineer" to review and monitor compliances with British Standards, Employers Requirements and assist in establishing the general quality of the installation and the handover material. This service contributed to effective and proactive collaboration between the design and build team and hotel representatives leading to the creation of a highly integrated design for the building services solutions. The added value provided by the NDY appointment has led to further appointments for NDY to act as their Checking (compliance) Engineer on other new hotel projects.

The Courtyard by Marriott Hotel in Oxford City centre opened its doors in July 2019.



## City of Dreams Cotai, Macau

#### Services:

 Architectural lighting (NDYLIGHT)

#### About the project:

NDYLIGHT was appointed to commission the casino lighting in installation for this major Asian venue in February 2009, following Steve Brown's previous experience with the project. The casino encompasses more than 400 tables over two levels including a significant VIP casino to cater for Macau's high roller market.

#### Features and Innovations:

- The main public gaming floor has a massive-scale programmed LED ceiling, which runs 24/7
- The casino features numerous bespoke large-scale 'light sculptures' lit in association with designer Stephen Hennessy, which are central to the gaming experience
- Lighting control involved over 2000 dimmed channels and 1500 LED circuits.

The casino encompasses more than 400 tables over two levels including a significant VIP casino to cater for Macau's high roller market.



## Hyatt Residences Auckland, New Zealand

#### Services:

#### About the project:

The Hyatt Residences is a 17-storey high-quality

apartment building that is joined to the original

Hyatt Hotel building in Auckland Central. A few

of the apartments are occupied by permanent

and basement levels of the development also

incorporate a ballroom, conference facilities,

serviced and let by the Hotel. The ground

residents, with the majority of the 112 apartments

a swimming pool, health spa, bar and restaurant.

- Acoustics
- Communications/ICT
- Electrical
- Security
- Vertical transportation

#### Features and Innovations:

- Liaison with the electricity network provider for the establishment of an onsite substation
- Individual electricity retailer's meter within each apartment
- Access control system linking to the existing hotel system and entry phone system
- Sound isolation for airborne and impact noise
- > Plumbing, mechanical and lifts noise control
- > Sound control for ballroom and function areas.

...a 17-storey high-quality apartment building that is joined to the original Hyatt Hotel building in Auckland Central.



## Hilton Prague Hotel Prague, Czech Republic

#### Services:

 Architectural lighting (NDYLIGHT)

#### About the project:

Three key spaces make up the 'Cloud 9' sky bar; an extended feature corridor, the bar and two outdoor terraces. Working closely with the interior designer the lighting is an integral element to the highly coloured and patterned interior.

#### Features and Innovations:

- The spa has been designed to capitalise on natural light during the day. At night, cutting edge LED is employed to create an interactive, dynamic, exciting and changeable bar environment.
- The demanding requirements of the sky bar programme required the accommodation of everything from executive breakfast through to elegant dining, after work drinks and even a trendy night club.

At night, cutting edge LED is employed to create an interactive, dynamic, exciting and changeable bar environment.



## Crown Melbourne – Various Projects Melbourne, Australia

#### Services:

#### About the project:

#### Various master planning & engineering consultancy services West End Master plan Un 2010 NDY were communication

In 2010 NDY were commissioned to develop the master plan for the Crown West End.

The West End redevelopment included building services for themed gaming and entertainment. The services needed to be flexible enough to encompass the changing events that occur throughout the year as well as managing all normal operational requirements.

#### Crown Casino – Pit 12

NDY were commissioned to design the Pit 12 amenities block in the east gaming area of the prestigious Crown Casino. NDY worked closely with architects Bates Smart.

A project challenge included keeping the casino as a 'live' site to operate 24 hours a day, seven days a week. The design for the new switchboards and electrical services relocation was required to incorporate this factor and minimise any disruption to Crown patrons and operation.

#### Crown Casino - Bistro Guillaume

NDY were commissioned to design the new Bistro Guillaume restaurant, replacing the previous long standing Brasserie tenancy. In coordination with architects Red Design and working closely with the project managers at Crown, NDY provided engineering consulting services to overcome the limitations of the existing structure and services to suit the refurbishment.



### Holiday Inn Wellington, New Zealand

#### Services:

- Acoustics
- Architectural lighting (NDYLIGHT)
- > Electrical
- Fire Protection
- Hydraulics
- Mechanical

#### About the project:

- The Holiday Inn Hotel was the first purpose built hotel in Wellington in 18 years. It is a 14 Level hotel with 3 levels of owner-occupier Penthouse apartments above.
- The Holiday Inn is ideally situated in a prime location at the main entry to the downtown centre. The hotel boasts a bar, restaurant/cafe, retail shopping, swimming pool, gymnasium as well as conference facilities and covered parking.

#### Features and Innovations:

- NDY's acoustics team addressed mechanical, plumbing and lift noise issues and also made recommendations for external noise intrusion from traffic. Air and impact sound isolation between rooms, and equipment noise/on-site compliance testing was also provided.
- Specialist lighting design services were required for the public areas, including the open plan reception and restaurant. A lighting control system was required so that different scenes can be selected and local control given to specific areas.

The Holiday Inn Hotel was the first purpose built hotel in Wellington in 18 years.



## Montreux Palace Hotel

#### Montreux, Switzerland

#### Services:

Architectural lighting (NDYLIGHT).

#### About the project:

A major refurbishment was carried out at this famous lakeside property. NDYLIGHT were engaged to work with the interior designers to enliven the lobby and reception, brasserie, lounge and meeting rooms.

#### Features and Innovations:

- Heritage chandeliers were retained and supplemented with new energy efficient architectural luminaires.
- The scheme sought to retain original the character of the spaces whilst updating it to be a modern and efficient hotel.

## InterContinental Melbourne – The Rialto

#### Melbourne, Australia

#### Services:

Electrical, Fire protection, Hydraulics, Mechanical, and Vertical transportation.

#### About the project:

Norman Disney & Young was responsible for the design and construction phase review of all building services associated with the project. Our involvement was from initial project inception through to completion and handover to the client.

#### Features and Innovations:

 The InterContinental Melbourne – The Rialto has been refurbished to reinstate the property to a first class international standard hotel.

## Trianon Palace Hotel

#### **Versailles, France**

#### Services:

Architectural lighting (NDYLIGHT).

#### About the project:

Located one hour from Paris, the Trianon Palace & Spa, a Westin Hotel, is situated in the heart of Versailles sitting on the edge of the Royal domain of Versailles.

As part of the refurbishment and modernisation to the 199 room hotel, NDYLIGHT was engaged to provide specialist lighting design for the public front of house areas in the main hotel building.

#### Features and Innovations:

- Working closely with the interior designers NDYLIGHT developed the lighting concepts for the hotel entrance, reception, the gallery, Gordon Ramsay's first restaurant in France, a ball room and the meeting spaces.
- The challenges of the project included working to a compressed a programme ensuring the hotel was closed for the shortest time possible and working and responding to the design variations that arise when refurbishing an existing structure.

# 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.



CEO Norman Disney & Young

Stuart Fowler

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