

## HEALTHCARE EXPERIENCE

**2005** EPWORTH HOSPITAL BOX HILL \$40M  
ST ANDREW'S WAR MEMORIAL HOSPITAL \$42M  
ST VINCENT'S HOSPITAL REDEVELOPMENT/REFURBISHMENT \$4M  
CCPP DIAGNOSTIC PROCUREMENT (UK) £2.2B  
CCPP ELECTIVES PROCUREMENT (UK) £3.5B  
**2004** DOH MOBILE MRI PROCUREMENT (UK) £74M  
HAMMERSMITH HOSPITAL IMAGING FACILITY (UK) £60M  
DOH MOBILE OPERATING THEATRES PROCUREMENT (UK) £120M  
**2003** EPWORTH HOSPITAL RICHMOND \$22M  
DOH INDEPENDENT SECTOR TREATMENT CENTRES (UK) £500M  
DOH MOBILE OPHTHALMIC SURGICAL FACILITIES (UK) £60M  
**2002** ROYAL WOMEN'S HOSPITAL REDEVELOPMENT \$120M  
ROYAL BRISBANE HOSPITAL REDEVELOPMENT \$80M  
**2001** INNER & EASTERN HEALTH CARE NETWORK \$43M  
**2000** ROYAL BRISBANE HOSPITAL REDEVELOPMENT \$240M  
ST ANDREW'S WAR MEMORIAL HOSPITAL \$13M  
MATER HOSPITAL COLLOCATION AT REDLANDS HOSPITAL \$12M  
WESLEY HOSPITAL \$121M  
LOGAN HOSPITAL REDEVELOPMENT \$20M  
**1999** IPSWICH HOSPITAL REDEVELOPMENT \$55M  
SOUTH WEST HEALTH CAMPUS \$53M  
**1998** ROYAL MELBOURNE \$10M  
THE ALFRED HOSPITAL \$5.8M  
ST JOHN OF GOD MEDICAL CLINIC \$35M  
**1997** TOOWOOMBA HOSPITAL REDEVELOPMENT \$45M  
**1995** ST VINCENT'S HOSPITAL IN-PATIENT FACILITY \$160M

## NDY HEALTH...

AN  
INNOVATIVE  
HEALTH  
DESIGN  
CONSULTANCY  
DELIVERING  
MULTIDISCIPLINARY  
ENGINEERING  
EXPERTISE  
TO  
ACHIEVE  
INNOVATIVE  
DESIGN  
SOLUTIONS  
THAT  
CREATE  
CALMING  
HEALING  
ENVIRONMENTS.

[www.ndy.com](http://www.ndy.com)

MELBOURNE SYDNEY BRISBANE PERTH CANBERRA AUCKLAND WELLINGTON LONDON MANCHESTER KUALA LUMPUR

NORMAN DISNEY & YOUNG



# Our vision To be acknowledged as the best practitioner in our field.

## NDY HEALTH

NDY Health has a considerable track record in acute health projects throughout Australia, New Zealand and the United Kingdom.

The NDY Health initiative reflects a group commitment to delivering exceptional engineering services to the highly specialised healthcare industry.

NDY brings to healthcare qualified and skilled personnel with broad capabilities in electrical, mechanical, communications, fire protection, vertical transportation, hydraulics, specialist lighting and ESD services.

Each practitioner has a strong understanding of the discipline-specific functional imperatives that underpin a successful healthcare facility and design.

NDY Health aims to become the point of reference for innovative patient-focused solutions on health, teaching and research laboratory projects.

## OUR PHILOSOPHY

As international multidisciplinary engineering consultants, NDY is committed to delivering cost effective and innovative engineering designs.

By embracing evidence-based design techniques, NDY responds to client business objectives, contributing significantly to the creation and maintenance of health-friendly environments to benefit patient, staff and therefore healthcare providers.

Scientific research focusing on evidence-based design outcomes has shown that sound design contributes to:

- improving patient recovery times
- reducing hospital-acquired infection rates
- reducing the incidence of patient treatment errors
- lowering stress levels
- enhancing staff retention rates

NDY maintains that the building services we engineer today should withstand the test of time, and are forward thinking, efficient, user-friendly, safe, environmentally sound, delivered on time, within budget and satisfy the client brief.

NDY risk management and fully accredited in-house quality assurance protocols ensure that our design processes are subjected to rigorous periodic in-house scrutiny and refinement.

The basic principles of research, continued learning, and close integration with healthcare practitioners, further differentiate our services to clients.

The outcome is an international team of NDY Health engineers who provide consistently world class results.

## OUR SERVICES

### NDY Engineering Disciplines

- Mechanical
- Electrical
- Building Automation
- Security
- Fire Protection
- Communications
- Hydraulics/Public Health
- Vertical Transportation

### NDY Specialisations

- NDY Acoustics: Noise, Sound, Vibration
- NDY Environment: Sustainable Engineering
- NDY Fire: Fire Safety Engineering
- NDYLIGHT: Creative Lighting Design
- NDY MPlus: Energy & Maintenance Management
- NDYnet: Networks, Exchanges & Telecoms

### NDY Specialist Industry Sectors

- Construction Quality: Equipment, Materials & Workmanship
- Infrastructure: Rail, Roads, Tunnels
- Information Technology
- Power Quality: Power Performance, Protection & Safety
- Tenancy, Interiors & Refurbishment

### NDY Deliverables

- Feasibility Studies
- Due Diligence Reports
- Design Briefs
- Performance Specifications
- Design Documentation
- Engineering Cost Plans
- Procurement Frameworks
- Construction Quality Reports
- Inspection & Test Plans
- Commissioning Programs
- Energy Audits
- Risk Assessment Audits
- Maintenance Management
- Electronic On-line Documentation
- Education Program



Calming Healing Environments



**OUR EXPERIENCE INCORPORATES**  
**ACCIDENT & EMERGENCY**  
**AGED CARE**  
**BREAST SCREENING**  
**CENTRAL ENERGY FACILITIES**  
**CENTRAL STERILISATION UNITS**  
**COMMUNITY & REHABILITATION**  
**CONSULTING SUITES**  
**CRITICAL CARE**  
**DAY & RESPITE CARE**  
**DAY SURGERIES**  
**ENDOSCOPY UNITS**  
**HIGH DEPENDENCY**  
**HYDROTHERAPY**  
**INTENSIVE CARE**  
**KITCHENS & CATERING**  
**MATERNITY & OBSTETRICS**  
**MORTUARIES**  
**NUCLEAR MEDICINE**  
**ONCOLOGY**  
**OPERATING THEATRES**  
**PAEDIATRIC**  
**PALLIATIVE CARE**  
**PATHOLOGY & LABORATORIES**  
**PHARMACIES**  
**PSYCHO-GERIATRIC CARE**  
**RADIOLOGY, IMAGING & MRI**  
**REPRODUCTIVE MEDICINE**  
**SERVICES INFRASTRUCTURE**  
**SIMULATED SKILL DEVELOPMENT UNITS**  
**SURGICAL & MEDICAL WARDS**

## Patient Focused Evidence Based Design



### ST VINCENT'S HOSPITAL REDEVELOPMENT MELBOURNE

As part of the redevelopment of St Vincent's Hospital in Melbourne, NDY was involved in the design and construction of the \$160M in-patient facility.

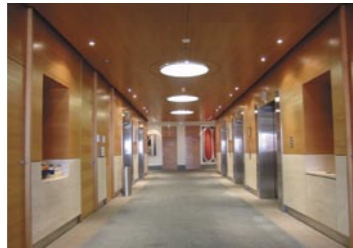
Further NDY contributions at St Vincent's Public Hospital include:

#### MRI

Design of all services for a second Siemens MRI machine installed in the basement of the Healy Wing.

#### Healy Building

Upgrading electrical, mechanical, hydraulic and fire services to rejuvenate the Healy Wing, including a new substation, main switchboard, air cooled chillers, calorifiers and fire services.



**Medical Surgical Training Facility**  
The design of all services for a state of the art medical surgical training facility, which incorporates a conference room, lecture theatre, laboratory, mock theatres and patient simulator.

The services included lighting control and dimming systems, interfacing with audio-visual systems, and medical gases.

#### Consulting Suites

The design of all services for 800m<sup>2</sup> of new consulting suites for both private and public hospitals.



### ST JOHN OF GOD HOSPITAL SUBIACO PERTH

The St John of God Hospital redevelopment comprises substantial expansion and refurbishment of existing accommodation.

NDY is responsible for design and documentation of mechanical services and complex medical gas systems.

Main aspects of the redevelopment include:

- expansion of the theatre suite and comprehensive Cancer Care Centre
- an ambulatory care centre comprising day procedure unit and consulting facilities
- a landmark chapel
- multi-level car parking
- progressive refurbishment of existing accommodation

Maintaining operational continuity throughout the progressive refurbishment and expansion works is a critical requirement.



### ROYAL BRISBANE HOSPITAL (RBH) REDEVELOPMENT BRISBANE

NDY has undertaken the auditing, master planning and design of building services on a number of significant RBH projects including:

- Biological Research Facility
- Central Energy Services Building
- Pharmacy & Stores
- Royal Children's – Health Services Building
- RBH Psychiatric Centre & Discharge Unit
- Royal Children's Medical Block
- Site-wide Communications & Technology systems

The recently completed Central and East Blocks were undertaken as part of an engineering joint venture for the Queensland Health Departments \$350M redevelopment of the Herston Campus.

The Herston Hospitals Complex includes:

- Royal Brisbane Hospital
- Royal Women's Hospital
- Royal Children's Hospital
- University of Queensland
- Herston Campus
- Queensland Institute for Medical Research.



RBH is the most important Health Services complex in the state of Queensland and the largest in terms of bed numbers in Australia.

Mid 2005, NDY was commissioned to undertake a campus-wide quantitative assessment of security risk exposures.

A range of risk control options including CCTV, public duress/intercom stations, mobile duress systems, electronic access control systems and patient tagging systems were evaluated which resulted from the assessment.

Risk control options having a significant surplus life cycle cost benefit over the cost of security risk exposures formed the basis of the technical systems included in the Security Master Plan.

The Master Plan also offered general guidance in relation to building internal and external environments, security management, hospital policies, fire protection and security staffing arrangements.



### NATIONAL IMPLEMENTATION TEAM DEPARTMENT OF HEALTH UK LONDON

NDY was engaged by the Department of Health National Implementation Team to provide building services advice to deliver Treatment Centres throughout the United Kingdom.

The program is worth £2.5B and plans to deliver over 50 new Treatment Centre facilities for surgical and diagnostic procedures.

Treatment Centres provide orthopaedic, ophthalmology, chemotherapy, ENT surgical suites and diagnostic facilities for fixed CT and MRI scanners.

NDY will incorporate international best practice to the NHS by delivering and providing building services technical advice for the Treatment Centre facilities on existing NHS sites and green field sites.

The challenge of integrating the Treatment Centres into an existing NHS hospital and maintaining the continuity of service and operation of the hospital required NDY to analyse the infrastructure to determine reliability of the existing systems along with value for money.

In some instances, this required Treatment Centres to be stand-alone without cross-connection into the existing infrastructure.