

Corrections

Capability Statement



Table of contents

Introduction	03
Our values, purpose & vision	04
What we do	05
Our corrections capabilities	06
Sustainable corrections facilities	09
NDY corrections experience	10



**NDY by
numbers**

established
1959

600+
people

9
key markets

12
offices

5
countries



Introduction

We have provided services to modern and purpose-built facilities as well as aiding in the redevelopment of correctional centres.

Our expertise in mechanical, electrical, fire protection, hydraulics, communications, fire engineering and sustainability have been extensively utilised by clients. NDY brings considerable points of difference, including the following:

- › Strong understanding of the requirements for safety, security, sustainability, risk management and normalised living to promote rehabilitation and reintegration
- › Strong credibility with corrections and government departments
- › Working knowledge and understanding of cell and fire safety guidelines
- › Working knowledge of operator requirements
- › Delivery of innovative designs that enhance community safety by securely and humanely containing prisoners
- › Building a successful rehabilitation and recidivism record by integrating latest technology into delivering programs.

We understand the sector's unique challenges such as strict cell and fire safety; prevention of wilful damage to systems; and the need to balance capital costs with energy consumption and long-term maintenance costs.

We employ the collective skills and knowledge of our team to deliver best practice in custodial care. The past and recent experience gained in the delivery of correctional facilities will be applied to good effect.

This document highlights our relevant experience and key projects which align with your requirements, and we look forward to the prospect of working with you on your next project.

NDY has the experience needed to ensure that the correctional facilities we work on are safe, resilient and secure.

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



Hopkins Correctional Centre Expansion, Ararat, VIC

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

Our corrections capabilities

NDY has extensive experience in the delivery of prison engineering services. Our focus is on designing safe, secure and sustainable prisons with plant and equipment arranged in such a way that maintenance and servicing is located outside prisoner areas.

We adopt an integrated approach where access to plant rooms are provided via normal walk-in or fixed ladders eliminating specialised access equipment or scaffolding. Roof mounted equipment is strategically avoided to reduce the likelihood of concealment and climbing anchor points.

Critical Drivers in Corrections

The critical drivers are:

- › Reducing rates of recidivism or re-offending
- › Prisoner education and healthcare delivery
- › Providing safe facilities for prisoners and staff
- › Reduced Operating Costs and Sustainability
- › Concealing of engineering services and securing against tampering
- › By taking these into account at all stages of the project, we can ensure that the final design is suitable for immediate needs, as well as providing a solid foundation for the future.



Hopkins Correctional Centre Expansion, Ararat, VIC



Hopkins Correctional Centre Expansion, Ararat, VIC

Our corrections capabilities (continued)

Mechanical Services

- › Central cooling and heating plant located in dedicated plant areas; chilled and heating hot water distribution system to nearby prison buildings
- › Local air conditioning for remote prison buildings
- › Air flow monitoring to sense airflow distribution or prisoner blockage
- › Ventilation systems with prescribed perforated grills to avoid self harm
- › Smoke hazard management for fire safety in the cell and to permit managed evacuation.

Hydraulics (Plumbing)

- › Site wide water strategy and recycled water systems
- › Sewer macerator and pumping system
- › Evaluation of sanitary fixtures, appliances and fittings such as electronic tapware, toilet pan with integral seat and lid that does not provide a ligature point, shower/basin complete with detention pattern spout plughole and anti-hang security grate.

Electrical Services

- › External lighting and interface with security for step up and step down on perimeter alarm
- › Security lighting and service illumination designed consistent with CCTV technology
- › Vandal proof recessed lighting
- › Anti-ligature fitting.

Fire Protection

- › Aspirated cell smoke detection system to provide reliable early warning and tamper alert
- › Institutional automatic fast response fire sprinklers which are specifically designed for secure facilities
- › Flush sprinkler heads in non-prisoner areas to avoid damage
- › Communication systems to facilitate officer response and a managed evacuation strategy in the event of an emergency.

Fire Engineering

- › Control the rate of fire growth through cell layout, material selection and use of fire retardant materials
- › Compartmentation options to limit fire spread.
- › Fire safety measures, e.g. fire detection and alarm, smoke hazard management and emergency procedures to protect occupants
- › Life safety through minimising smoke spread, allowing prison staff to respond and safely evacuate inmates or extinguish the fire risk
- › Reliable early detection of the fire to allow early response from prison staff
- › Automatic suppression system options to extinguish the fire

Our corrections capabilities (continued)

Communications

- › Passive Government Department data network
- › Government department voice networks including PABX
- › Australian Government Information Security Manual (ISM) Strategy
- › Prisoner Interactive Learning Systems (PILS)
- › Prison co-Integrated Communications Network (ICN) hosting technology, emergency lighting, MATV, Building Management Systems, cell tapware, irrigation and lighting control
- › Terrestrial Radio and Satellite communications
- › Intelligent Building Systems (IBM)
- › Audio Visual Systems and video conferencing for Prisoner court and parole hearings
- › Computer room and data centre design including redundancy planning.

Prisoner Education

- › Prisoner Interactive Learning Systems (PILS) systems to enable each prisoner to undertake programs and operators to host educational, therapeutic and job-based training from the confines of a cell. This technology enables better education and healthcare, assisting in the services and lowering of recidivism rates

Gateway Solutions

- › Integrated platform for prisoner rehabilitation interfaced to a Prisoner Information Management Systems (PIMS). A common prisoner management solution enables centralized case management
- › Integrated Biometric Prisoner Movement Systems (BPMS). A Gateway solution links movement with prisoner 'structured day' activities ensuring that prisoner attendance to scheduled activities, programs, and drug dispensary are recorded and managed. PrisonerLink application allowing pre-approved family and friends to message Prisoners via web portal which, once checked and approved, is received via in-cell terminal.

Cyber Security

- › Delivery of all networks to PROTECTED classification under the Australian Government Information Security Manual. Owned and maintained by the Australian Signals Directorate, the ISM is the framework for networks up to Top Secret classification.

Sustainability

- › Energy management, including optimisation, conservation and minimisation strategies via active and passive measures
- › Renewable energy utilisation involving electricity generation from sun, wind, biomass, etc
- › Indoor environmental quality enhancements, adopting best practice methodologies, products and systems
- › Water conservation and re-use including storage, greywater recycling and usage minimisation techniques
- › Waste management, involving systems necessary during construction and on an on-going basis
- › Building material and finishes selection providing options for use of low embodied energy materials plus finishes that have minimal adverse impact on indoor air quality.



Youth Training Centre Adelaide, SA



Youth Training Centre Adelaide, SA

Sustainable corrections facilities

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.

From our deep experience working on correctional facilities, we understand that sustainable solutions can deliver significant financial savings. Sustainable buildings consume a fraction of

the energy and water of their non-green counterparts. Energy efficient mechanical systems can reduce the need for artificial heating and cooling by around 60 per cent – saving thousands of dollars in energy costs each year.

Energy-intensive facilities can realise substantial savings quickly and easily by commissioning and tuning existing equipment and investing in comprehensive upgrades to lighting and mechanical systems.

Our deep expertise working on corrections and justice facilities can deliver significant financial savings through energy and water-saving strategies that also increase occupant comfort and staff satisfaction.

The result? Facilities that are safe, secure and sustainable.



NDY **corrections** **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**



Corrections Australia

Hopkins Correctional Centre Expansion, Ararat, VIC

Services:

- › Communications/ICT
- › Cyber Security
- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Sustainability/ESD
- › Vertical Transportation

About the project:

Hopkins Correctional Centre is located approximately 200km west of Melbourne and is a medium security detention centre for men.

NDY was engaged by Aegis Correctional Partnership to undertake risk analysis of the existing construction and undertake strategic reconciliation with the State brief. NDY's role expanded shortly thereafter to encompass all services design for the new and existing facilities.

The new facility comprises an additional 358 medium secure beds and shared services to support approximately 740 prisoners in one single, cohesive and coherent correctional facility.

Features and Innovations:

- › A key challenge of this project was delivering on the State's initiative reducing the rates of recidivism (re-offending) through computer based programmes and training. NDY was required to design in-cell computing environments for every prisoner to facilitate this Australian-first. A detailed cyber security overlay and technical treatment was developed by NDY to mitigate the risk of malicious cyber activity.
- › NDY further developed and delivered two (2) government networks classified to PROTECTED level under the Australian Government ISM, which met the satisfaction of the appointed IRAP assessor.

- › The designs minimise impact on the environment and ongoing facilities expenditure, with initiatives such as water saving with treated rainwater from the blackwater treatment plant and alternative energy such as solar design and natural ventilation being incorporated.



NDY maintained an integral role in the development of construction migration and integration strategies throughout the construction period to mitigate project risk.





Corrections, Australia

Rivergum Residential Treatment Facility, Hopkins Correctional Facility, Ararat, VIC

Services

- › Acoustics
- › Communications
- › Electrical
- › Fire Engineering
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Sustainability

About the project

Rivergum Residential Treatment Facility is a twenty-bed secure accommodation community, located adjacent to Hopkins Correctional Centre in Ararat. The facility delivers short-term, intensive treatment and interventions for serious sex offender and violent offenders on supervision orders. It provides a secure, therapeutic environment and forms part of Victoria's Post Sentence Detention and Supervision Scheme. Offenders subject to a supervision order are not undergoing a sentence and are not in custody, hence a key project objective was to design a safe and secure facility that maintains a residential aesthetic and atmosphere.

The development is comprised of 4 neighbourhoods that can cater to separate cohorts, and includes individual one-bedroom,

residential style units to encourage independent and community living. The neighbourhoods share a central administration building housing staff offices, training spaces and various rooms for programs, training and education.

The first facility of its kind in Victoria, NDY was involved from concept design through to construction and delivered a full gamut of services to the project, including innovative sustainability solutions with ambitious targets for energy efficiency. Key features include a 236kw solar array, with solar panels mounted on a structure over the car parking, doubling up as rain and sun protection. Ground-source heat pumps provide high-efficiency all-electric heating and cooling to the whole facility, helping deliver on our client's commitment to carbon neutrality

by 2050. Rivergum was shortlisted in the 2019 Victorian Architecture Awards Sustainability Category.

The main administration building boasts mixed mode ventilation that is integrated with the mechanical system. When conditions outside are suitable, motorised windows can be opened and air conditioning is not needed. The system is intelligent enough to prevent windows being opened when outside conditions are unsuitable.

Ultimately, Rivergum provides secure and comfortable accommodation for residents in a therapeutic, rehabilitative environment that aims to improve re-integration into the community and reduce rates of recidivism.



Youth Facilities Australia

Youth Training Centre, Adelaide, SA

Services:

- › Acoustics
- › BIM
- › Electrical
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Sustainability/ESD
- › Vertical Transportation

About the project:

NDY's expertise was engaged to design the new \$67 million Youth Training Centre at Cavan, Adelaide.

Replacing the outdated Magill facility, the project provides accommodation for 60 residents, with potential to expand to 90 as required.

Features and Innovations:

- › The project provides a modern environment for the rehabilitation and training of young people in need. The site has been designed as a campus with distinct functional buildings, recreation and space for reflection and study.
- › NDY also coordinated the sustainable initiatives for the project which include life cycle analysis, efficient design and improved indoor environment.

“

The site is designed as a campus with distinct functional buildings, recreation and space for reflection and study.

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Corrections, Australia

Barwon Prison Olearia High Security Unit, vic

Services

- › Acoustics
- › Communications
- › Electrical
- › Fire Engineering
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Sustainability

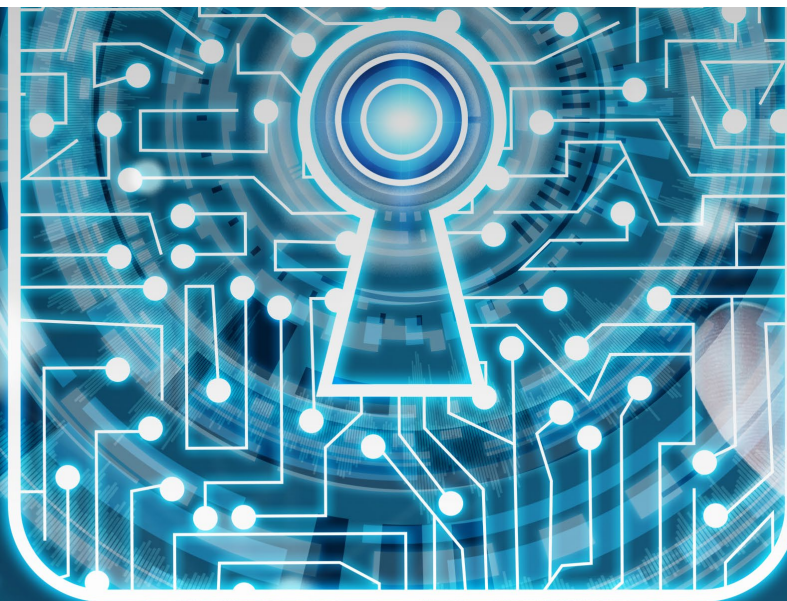
About the project

In 2013, Corrections Victoria identified the need for a very high security unit at Barwon Prison to accommodate prisoners who pose the greatest security and safety risk, or who need to be separated from the mainstream prisoner population for their own protection.

The unit can be considered a prison within a prison, separated from the rest of the facility and including dedicated interview rooms, visits and program areas, medical facilities and observation cells. It can accommodate up to 40 prisoners in single cells, including 20 that have their own exercise yards.

The high security nature of the unit meant that the placement and access to engineering services needed careful consideration to ensure that maintenance tasks could be carried out without disruption to day-to-day operations. The solution to this was a dedicated services zone spanning above the cells and accessible externally to the building which meant that maintenance staff could carry out their activities without needing to interact with prisoners. Major mechanical plant rooms were also located on the perimeter of the building with external access to achieve the same outcome.

The building was initially constructed outside of the existing prison secure perimeter with a new wall constructed around the unit that was ultimately connected back into the existing facility. The breakthrough of the existing wall into the new compound and the connection of the new building into the existing site infrastructure presented a number of operational and business continuity risks. NDY worked closely with the prison operations and maintenance staff and the builder to develop cutover strategies and contingencies to ensure that these risks were mitigated.



Corrections, Australia

Ravenhall Prison PPP, Ravenhall, VIC

Services:

- › Cyber Security
- › ICT Consultancy

Peer Review:

- › Electrical
- › Fire Engineering
- › Fire Protection
- › Hydraulics
- › Mechanical
- › Security.

Ravenhall Prison is a new medium security Victorian Prison with 1000 beds, with the provision for expansion to 1300 beds in the future. Under the GEO Continuum of Care model, Ravenhall Prison provides enhanced in-prison offender rehabilitation programs including evidence-based treatment, integrated with post-release support services.

Operated by Forensicare, dedicated Forensic Mental Health facilities support cognitive behavioural treatment programs aimed at preparing prisoners for successful community reintegration.

In addition to peer review services, Norman Disney & Young (NDY) was engaged in a cyber security advisory and implementation role. This included the delivery of networks accredited to a PROTECTED classification under the ISM; a first for any Australian Prison.

To achieve this, NDY comprehensively briefed all stakeholders on the methods necessary to achieve this goal, from development of the project delivery strategy, down to the most detailed cryptographic requirements.

All seven classified networks were delivered to the satisfaction of three independent IRAP assessors.

NDY engaged with all key stakeholders to develop technical and operational strategies that would deliver a 'cyber ready' facility. The strategies were then employed by JHG designers and GEO to mitigate cyber security risk, throughout the project.

The NDY team collaborated closely with all parties involved to help up-skill the team, particularly in regard to ISM. This allowed the team to develop a process and framework that could be understood by all stakeholders.

The integral nature of Cyber Security in this project prompted NDY to develop an entirely new business capability to service this expanding need. By addressing cyber security from a building engineering perspective, we can ensure that the information and critical infrastructure is protected, from design to delivery.



Kimberley District Police Complex Kimberley, WA

Services:

Communications, electrical, hydraulics, mechanical and security services.

About the project:

Kimberley District Police Complex was designed to replace the old Broome Police Station. The redevelopment was coordinated in two stages. This allowed the original facility to operate without disruption whilst the new one was being built.

The new police complex incorporates the latest in modern policing and provides secure car parking, administration areas, change rooms, ablution blocks, padded and custodial cells, an indoor gymnasium, forensic laboratory, vehicle inspection garage, sally port and community policing rooms.

Features and Innovations:

- › Engineering services design included air conditioning and ventilation to suit the humid Kimberley coastal environment, general lighting and power, external security lighting, emergency power generation, hot and cold water, sewerage, communication and security systems in line with WA Police standards.



New Grafton Correctional Centre PPP Bid, Grafton, NSW

Services:

Acoustics, electrical, fire protection, fire engineering, hydraulics, and mechanical.

About the project:

NDY was part of the GEO Group PPP bid team for the New Grafton Correctional Centre alongside Lend Lease/Richard Crookes Construction (JV D&C Builders) and Guymer Bailey architects. The project consists of a 1700 bed facility including a 1,000 bed male maximum security facility, 300 bed female maximum security facility and a 400 bed male minimum security facility.

The Project will be a major multifunctional, regional correctional complex - a hub - servicing the northern part of NSW. In particular, it will be the primary correctional facility for corrections operations from the Queensland border in the north, to Kempsey in the southeast and Tamworth in the southwest. It will be responsible for remand, reception and sentenced offender cohorts. The Project is located approximately 12 kilometres southeast of Grafton.



Corrections Victoria Fire Risk Management Department of Justice, vic

Services:

Fire protection services.

About the project:

NDY was appointed as Fire Safety Consultants for the assessment of existing Maximum, Medium and Minimum Security Prisons in Victoria.

NDY, as part of the consultant team, assessed and analysed the existing conditions within each prison in Victoria to define levels of life safety in the event of a fire.

Features and Innovations:

- › Fire safety options were developed for each prison on the basis of agreed fire scenarios and their impact on existing cell and common space in accommodation blocks.
- › NDY have also been involved in the implementation of the fire safety upgrade for a number of prisons. The implementation team identified all matters in the assessment report for tender documentation. The documentation and construction supervision were carried out in line with NDY quality assurance and technical guides to ensure correct installation of the works.



Marngoneet Correctional Centre, Lara, VIC

Services:

Automation, communications, electrical, fire engineering, fire protection, hydraulics, mechanical and sustainability/ESD services.

About the project:

Marngoneet Correctional Centre is a modern, purpose built a medium security correctional facility, which was designed to maximise prisoner rehabilitation. The facility provides accommodation for 300 prisoners. NDY was initially involved with preparing services information for the Victoria Correctional Infrastructure Partnership (VCIP) which was used for the successful tendering of the works. This project was delivered through Partnerships Victoria with their agreement with VCIP to design, construct and operate the CPC for a period of 25 years.

Features and Innovations:

The following sustainability initiatives were incorporated into the design:

- › Rain water harvesting, treatment and reuse within the facility
- › Selection of energy efficient plant & equipment
- › Use of high efficiency light fittings, including the use of solar powered external lights
- › Orientation of buildings and glass treatment to minimise heating and cooling requirements
- › Use of natural ventilation where applicable
- › Solar hot water heating.



Corrections Australia

Acacia Prison, Wooroloo South, WA

Services:

Electrical, hydraulics, risk management and security services.

About the project:

The Acacia Prison at Wooroloo South is a 750 bed male medium security facility in WA. NDY was responsible of features including: taut wire fence, microphonic cable systems, perimeter and internal CCTV systems, building alarm systems, access control systems, radio duress system, cell intercom system, and ergonomic control room design.

Features and Innovations:

- › A risk assessment was commissioned following completion of preliminary design documentation to assess the adequacy of proposed security arrangements and to ensure that residual risk levels met stakeholder expectations.
- › The methodology for the risk assessment was based on an assessment technique tailored specifically to evaluate risks associated with escape, serious self harm or suicide, assault and riot/loss of control.
- › Review of risk assessment outcomes provided a basis for optimisation of the security systems design based on the cost effectiveness of various risk reduction measures versus the notional cost of the risk.



Corrections Australia

Woodford Correctional Centre, Woodford, QLD

Services:

Mechanical, electrical, fire protection and fire engineering services.

About the project:

Situated approximately 80 kilometres north of Brisbane, the Woodford Correctional Centre was expanded with the provision of 400 extra high security beds. The expansion included 12 cell blocks, education building with classrooms, central block with visiting facilities, dining and interview areas and a covered exercise area with a gym. The detention and administration areas were expanded within the existing centre.

Features and Innovations:

- › To suit the security needs of the centre, the new areas were constructed outside the perimeter fence and tested before the fencing was expanded to encompass the additional areas. This led to the design of systems that were generally independent of the existing systems.
- › Fire engineering design was applied to the detention expansion to upgrade the performance of the existing smoke control systems whilst maintaining the use of the building for its intended purpose.
- › The air conditioning design was specifically tailored to suit the numerous security and safety issues relating to the centre as well as the provision of easily maintained services.



Corrections Australia

Metropolitan Remand Centre Stage 2 Expansion, Ravenhall, VIC

Services:

Communications, electrical, fire engineering, fire protection, hydraulics, mechanical and sustainability/ESD services.

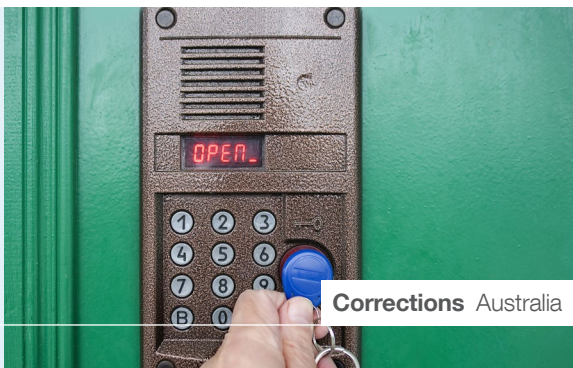
About the project:

The Metropolitan Remand Centre is a modern, purpose built remand facility, originally built in 2005. In 2014, NDY was engaged to document a new two storey, 75 room mainstream accommodation building in the existing prison grounds. The facility includes 50 rooms of single beds and 25 rooms with bunk beds, providing a total population of 100 prisoners.

Features and Innovations:

The following sustainability initiatives were incorporated into the design:

- › Rain water harvesting and reuse for irrigation
- › Selection of energy efficient plant and equipment
- › Use of high efficiency light fittings
- › Provision of double glazed windows and thermal insulation to minimise heating and cooling requirements.



Corrections Australia



Corrections Australia



Youth Facilities Australia

Dame Phyllis Frost Centre, Deer Park, VIC

Services:

Mechanical services.

About the project:

NDY was engaged by Guymer Bailey Architects to undertake the design, documentation and contract review of the mechanical services for the new construction extension and upgrade projects for various Dame Phyllis Frost Centre facilities at Deer Park in Melbourne.

The DPFC provides maximum security, medium security and specialist accommodation for remand and sentenced women prisoners.

Features and Innovations:

- › New flexible Intensive Support Unit
- › Extension to the Medical Centre
- › Upgrade to the Multi Purpose Programs Building
- › Education Centre Upgrade and Expansion
- › Visitor Centre Upgrade and Expansion
- › Industries Workshop Expansion
- › Multi-faith Chapel Expansion.

VCIP Prison Projects, Lara & Ravenhall, VIC

Services:

Automation, communications, electrical, fire engineering, fire protection, hydraulics and mechanical services.

About the project:

NDY was initially involved with preparing services information to the Victoria Correctional Infrastructure Partnership (VCIP) which was used for the successful tendering of the works as part of the overall VCIP PPP bid. Both facilities are modern, purpose built correctional centres, which are designed to maximise prisoner rehabilitation.

NDY was commissioned by VCIP in conjunction with their nominated Construction Manager, Boulderstone Hornibrook. This project was delivered through Partnerships Victoria with their agreement with VCIP to design, construct and operate the CPC for a period of 25 years.

Features and Innovations:

- › Strict cell and fire safety guidelines
- › Minimisation of self harm to vulnerable inmates
- › Prevention of wilful damage of systems caused by inmates
- › Balancing the initial capital costs with energy consumption and long term maintenance costs.

Melbourne Juvenile Justice Centre, Parkville, VIC

Services:

Fire protection services.

About the project:

NDY were commissioned by Melbourne Juvenile Justice to assess the fire protection in the existing Secure Welfare Facilities in Parkville. The Centre accommodates youth aged between 15 and 21 who are on remand or undergoing a sentence.

Features and Innovations:

- › The fire safety strategy developed by NDY resolved the conflict between security measures in secure areas and the principals of fire safety. A balanced integrated approach to emergency management was developed which takes into account the specific security, attempts of self harm and safety requirements of the particular client group.
- › Fire safety precautions and measures included concealed multi-point aspirated smoke detection, electronic pager emergency warning interface to Response Teams, institutional sprinkler heads, smoke compartmentation and access key rationalisation.

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