

INNOVATION'S HISTORIC NEW HOME

CLIENT : Development & Planning Environment NSW

MAIN CONSTRUCTION COMPANY : FDC Construction & Fitout

ARCHITECT : TKD (Tanner Kibble Denton)

CONSTRUCTION VALUE : \$18 million

The Western Sydney Start-up Hub is a heritage refurbishment for the Department of Planning, Industry and Environment, and the adaptation of five buildings to facilitate their re-use including essential conservation works.

Set among heritage sandstone walls and billowing jacarandas, Sydney's newest start-up hub is coming to life. Western Sydney is one of Australia's fastest growing and most culturally diverse communities. Part of the New South Wales Government's Greater Parramatta North Program, the Western Sydney Start-up Hub (WSSH) offers a space for innovators, entrepreneurs, scaleups and businesses to grow and flourish.

WSSH's home is in an historic location, the Parramatta North Heritage Core – specifically the Parramatta Female Factory and the Parramatta Lunatic Asylum buildings. It was FDC's responsibility to transform them into the WSSH – while retaining their historical significance.

The walls of these buildings hold stories dating back nearly two centuries. The Parramatta Female Factory was Australia's first purpose designed convict facility for women. The Parramatta Lunatic Asylum

was originally established in 1847 for convicts but became a public asylum in 1849.

Before work began, the site was tested and evidence of Aboriginal inhabitants from around 7,000 years ago was found. Tools, signs of a camp site and other archaeological pieces deepened the site's historical and cultural significance. These finds can be viewed in the WSSH visitor space.

TKD Architects' Megan Jones, FDC Senior Site Manager, Jake Dufferin and the rest of our team were determined to preserve this history. "We want everyone to come to the site and enjoy it for its new purpose, but also understand its previous use," Megan says.

In total the project consists of five buildings. Restoring them was no small task, but niche trades, time-accurate materials and some creative solutions made it possible.

"Heritage work takes a lot of planning and needs passion and patience from everyone on the team. We have to think on our feet and come up with out of the box solutions," Jake explains. "You can't come in thinking you know everything – you'll fall flat on your face."

The architects created a design for each building that stayed true to its earliest form, removing previous extensions, and retaining original material where possible. On a site of this nature, discoveries are sure to be made. Both historical and Aboriginal archaeologists were present to monitor the excavation to avoid disturbing the in-ground relics.

"We needed to bring this new home for innovation up to speed with today's technology and standards, while honouring the past. It was our responsibility to make sure the almost 200-year-old structures could meet today's expectations," said Jake.

"With a considerate and detailed approach, the team re-consolidated and remediated the structures to ensure their integrity and all services were upgraded – from stormwater to sewer upgrades, to mechanical, fire and power systems. We were guided by meticulous attention to detail, expert archaeological advice, and Heritage Council approval."

The result is five stunning 19th-century sandstone buildings showcasing carefully reconstructed stonework capped with Welsh

slate and refined with copper gutters, lead work and flashing. Inside, innovators can enjoy all the 21st-century tech they need in open, high-ceilinged spaces, bathed in natural light.

"I just love the transformation this place has gone through. And the fact that these are beautiful contemporary spaces within historic buildings," says Megan. Despite their age, these buildings now boast a 5-star Green Star rating complete with solar PV systems and remote-control lighting.

Amongst its lush gardens, this new hub for innovation will inspire inhabitants through stories from past, present and future. Jake and Megan hope whoever finds themselves in the space will love it as much as they do. "I've become a little protective of this place. It's incredibly special. I hope people give it the passion and respect it deserves," says Jake.

FDC Construction & Fitout were honoured to work on such a culturally significant site, that means so much to so many. "We, too, are energised for the future and empowered by the past. And we hope all the new innovators in WSSH feel the same as they forge the ideas of tomorrow," expressed Jake.

For more information contact FDC Construction & Fitout, phone 02 8117 5000, email hello@fdcbuilding.com.au, website www.fdcbuilding.com.au





SUSTAINABLE STONEMASONRY

Founded in 2005, Sydney Stonemasons PL are experts in all aspects of stonemasonry. Whilst specializing in heritage restoration they also have a vast experience in stonemasonry on a commercial and residential scale.

The Sydney Stonemasons team began works onsite in early June of 2021. A total of five buildings at the North Parramatta site were refurbished and renovated for the Hub including the Female Factory, part of the old hospital and the kitchen block.

“We carried out a lot of repointing, desalination, new stone indents and created many new internal and external openings, whilst also modifying many existing openings” said Director Roscoe Hannagan. “Many of the original openings had been closed and we reconstructed them by installing structural steel lintels and carefully removing the sandstone infill. We also made few new openings to facilitate movement through the new buildings while leaving evidence of the later additions.”

“On one of the buildings the gable required immediate attention. We shored up the gable then catalogued and coded all stones in the wall before careful dismantling. When we removed the external stone skin, we found that there was no footing below the wall and the

internal brickwork was failing. We carefully dismantled the brickwork, put in a new reinforced concrete footing, and then reconstructed the internal brickwork, ensuring all windows and doors, the fireplace and chimney breast were all reconstructed to their original details.

We rebuilt using a combination of salvaged stone and new stone, cut, and dressed onsite, to match the original in profile and detail. Finally, the wall was cleaned and pointed using traditional lime mortar. All the salvaged material was stored for re-use and future repairs, maintaining as much of the original heritage fabric as possible.

“The job involved stabilizing the structure so as not to damage any existing features while we carried out our work. Also, colour matching the new stonework was a challenge and we spent a lot of time at Gosford Quarry searching for stone that would match. Eventually we used a mix of four different coloured stones to closely match the original stonework.

“We worked extremely well with FDC; they are a very good team. Our first job with them was at Shore School in North Sydney where we carried out sandstone cladding. FDC were happy with our work there and contracted us for Stage 1 at the WSSH and we will be on Stage 2 of the project, rebuilding the heritage perimeter wall.”

Sydney Stonemasons PL have established a strong reputation within the heritage restoration industry. They are based out of their factory in Hillsdale and employ up to 40 tradesmen with specialist skills who carry out all the preparation and restoration of sandstone and other masonry. The workshop is fully equipped with modern machinery to automate the process as much as possible.

“This allows us to complete work more quickly, as a result we are capable of completing large scale projects to the highest of standards in a timely manner.” said Roscoe.

As one of the leading stonemasonry firms in the country, Sydney Stonemasons PL have been at work on a number of significant Australian buildings. In 2020 they were at the Anzac Memorial Centenary Project replacing and repointing cladding stones, and later that year completed restoration work at the Australian Museum.

The future for Sydney Stonemasons PL involves expansion into the overseas residential and commercial market. In April 2022 General Manager Thomas boarded a plane to Dubai to open a new office.

“Australian architects are designing for Dubai and there’s a lot of heritage work there. We’ll be also looking at the sandstone cladding on the Dubai Museum as well as plans for a massive high rise where we



will be installing marble and granite cladding along with sandstone,” Thomas said.

For more information contact Sydney Stonemasons PL, 55 Smith Street, Hillsdale NSW 2036, phone 1300 075 544, email info@sydneystonemasons.com.au, website www.sydneystonemasons.com.au

THE PLUMBING EXPERTS

Established in 2012 TJO Plumbing Services specialise in all aspects of commercial plumbing and maintenance services from Newcastle to Wollongong including the Sydney CBD and metropolitan areas. In June 2021, TJO Plumbing Services started work at the WSSH.

“We were onsite, from the beginning of the demolition work as we were contracted to make safe, refurbish and investigate all existing pipework before we installed the hydraulic services,” said Owner, David Owsnett. “We then continued with the comprehensive fitout of all building services including hot and cold water supply, hot water plant, LP gas, fire hydrants, stormwater and sanitary plumbing and drainage as well as commissioning the whole system.”

“Working on heritage listed buildings is always challenging, the excavation was investigated by archaeologists and heritage consultants and they found some artefacts, old sandstone footings, that had to be documented and preserved.”

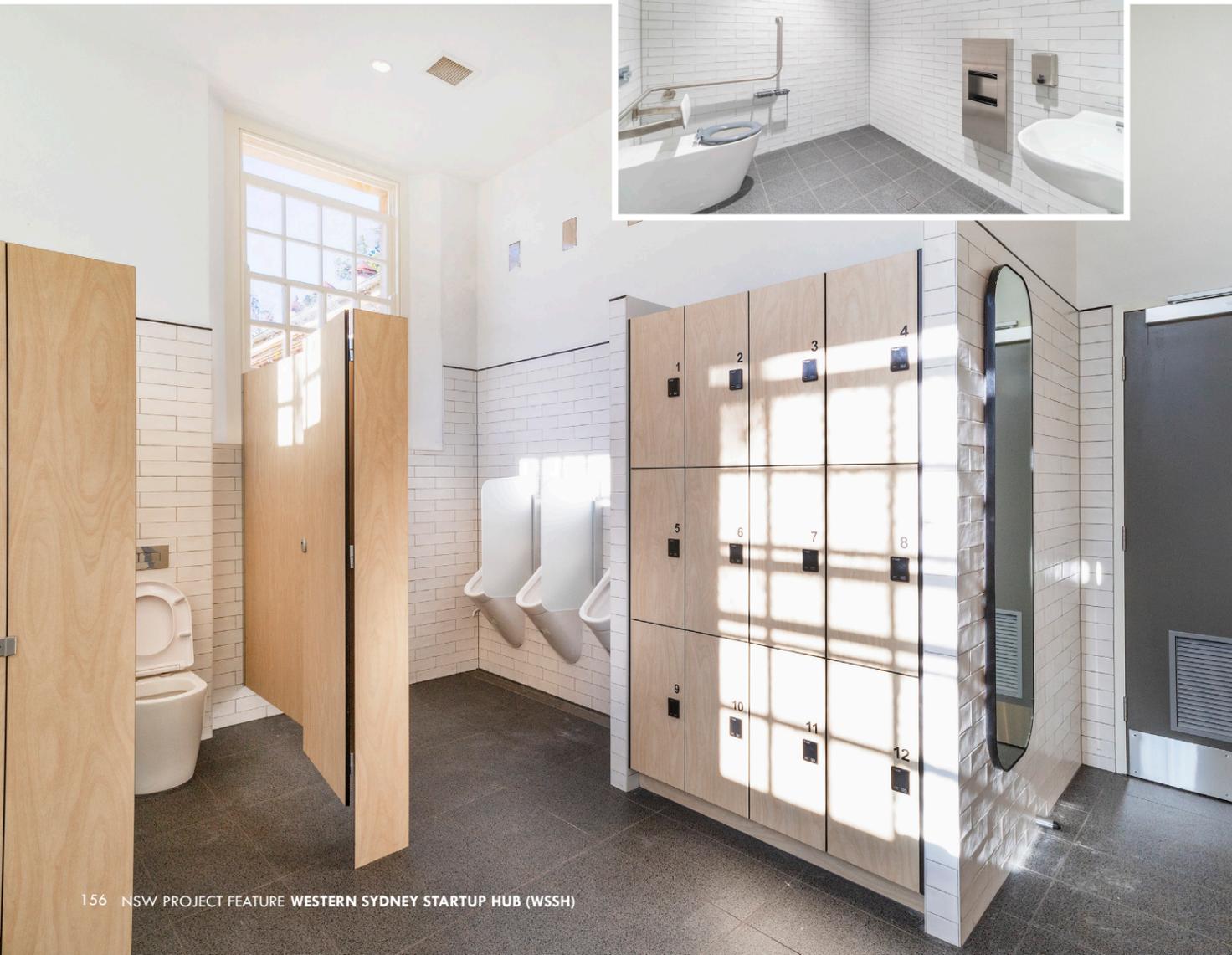
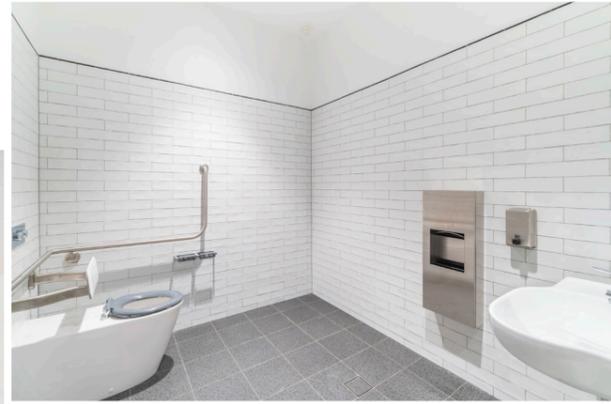
The Hub was a great project for us, TJO Plumbing Services have been working with FDC for the past eight years on a number of new projects and refurbishments. In 2021, one of our most recent with FDC, we completed the refurbishment of the Glasshouse Building for the Rolex shop in Sydney.”

TJO Plumbing Services will work with clients during the design phase to identify better construction methods and provide a comprehensive approach to site conditions and trades coordination. With a team of estimators for accurate tender submissions, TJO Plumbing Services have experience with contemporary energy systems, including heat pumps, for cost savings and Green Star ratings.

“More recently we are doing mostly commercial work, retirement villages, schools, shop fitouts and childcare centres,” said David. “We’ve also completed a number of dental surgeries along with crematoriums and a mortuary.”

From first breaking ground to commissioning and delivery, TJO Plumbing Services have the expertise required to complete a quality project also offering preventative and emergency maintenance, drain cleaning and repairs.

For more information contact TJO Plumbing Services, phone 0414 378 710, website www.tjoplumbingservices.com.au



PROFESSIONAL FITOUT & REFURBISHMENT

Permax Commercial is a dynamic company providing sophisticated interior fitouts with the supply and installation of partitions, ceilings, doors and fine joinery items across the Sydney CBD and metropolitan areas.

At the WSSH Permax Commercial commenced onsite work in August of 2021 installing internal fitout components across all five buildings including aluminium and glass partitions, plaster partitions, fire doors, aluminium doors, solid core doors, a number of feature suspended ceilings including detailed bulkhead and light pelmets.

“We installed CSR perforated plasterboard for the feature ceilings to building C107 and C104. This particular perforated product does not require any standard setting, rather joining the panels with minimum spacing to create a seamless finish. This was a challenge which we tackled head on, especially in the event area where we were working at above 6m heights. Safety was a priority as we worked from EWPs, lifting panels and balancing to complete the detailed work,” said Project Manager, Stephen Paric.

“We had anywhere between a team of 3–10 onsite and established exclusion zones and used a spotter to coordinate with other trades in these high-risk areas. External works were delayed due to inclement



weather which pushed out our programme, finishing up in April 2022,” said Stephen

“FDC is one of our most trusted and valued clients and we have established a very close working relationship with, and look forward to many more future projects. Over the last five years since our inception of working with FDC, we’ve completed an array of projects across the commercial and hospitality construction sectors, some of which include three Cornerstone Medical Health projects, Phoenix Gallery, Bloomberg Sydney Offices and Australian Competition & Consumer Commission (ACCC) Sydney offices to name a few.

“At Permax, we pride ourselves on working closely with our clients to bring the intended design to fruition and continually strive for a high quality fitout from the outset to project completion,” said Stephen.

For more information contact Permax Commercial, 2 Artisan Road, Seven Hills NSW 2147, phone 02 9674 4848, email info@permaxcommercial.com.au, website www.permaxcommercial.com.au

SETTING THE STANDARD

New Edge Group offer a comprehensive design and install service for all mechanical HVAC, electrical, data and communication technology needs.

In late 2021, New Edge's in house design team started detailing the design for the HVAC system at the WSSH. The mechanical systems consisted primarily of a variable refrigerant volume (VRV) heat recovery system. The project had several unique challenges including severe limitations due to the building's heritage nature, very high occupancies due to the use of the space and limitation of the existing building fabric. A key architectural intent for the project was to maintain the very high floor to ceiling heights, typically over 3.5m. This meant that a significant amount of mechanical equipment was required to be fit within extremely tight and conjoined spaces.

With sustainability a key focus for the project, a 5 Star Green star rating was achieved, mechanically this involved providing high efficiency system to reduce energy and CO² emissions, increased fresh air rates, better access and maintenance provisions from improved cleaning and more sustainable materials.

"NEG based our design on the original consultants, however due to the spatial constraints and increased size of equipment, the design was heavily modified to fit the ductwork and mechanical system, into an

old building, with timber ceilings and walls. To compound challenges onsite work was delayed due to COVID restrictions and bad weather, however with 20 site staff onsite throughout the project, we completed commissioning by the end of May 2022," said Project Director, Danny Canal.

"It was an interesting project carrying heavy heritage elements which required some out of the box solutions," said Project Manager, Stanley Eng. "Site Manager Mark Cannon and I worked together to achieve a good outcome for the end client, maximising floor-to-floors heights and higher fresh air rates for occupant amenity".

"The WSSH was our first job for FDC, and we've developed a good working relationship with them from which we have built a strong foundation," said Danny. "After the Hub, FDC contracted us for a \$10 million, multi-level, high end fitout with the installation of new HVAC systems for Goldman Sachs in the Sydney CBD."

New Edge Group's focus is to bring to each project the understanding of 'the little details matter'. "Our teams combine the knowledge and expertise of our internal design staff with experience and delivery of our construction and commissioning team members, to create a cohesive turnkey approach. New Edge prides itself of having a collaborative team all working towards the common goal of the project which we showed on the WSSH."

For more information contact New Edge Group, Level 8, 56 Pitt Street, Sydney NSW 2000, phone 02 9725 5555, email info@newedgegroup.com.au. website www.newedgegroup.com.au



LOCK AND KEY SOLUTIONS

Independent Locksmiths & Security were at the WSSH precinct from 2019 installing security and keying systems to existing buildings. Working with the state government's Property NSW, Independent Locksmiths & Security designed and installed the master key system for over 60 buildings across the precinct.

In 2021 FDC moved onsite and contracted Independent Locksmiths & Security to design, supply and install an extension to their existing master key system for the five heritage buildings.

"I carried out a survey of the buildings, noting the conditions and the security requirements for the tender submission and then designed the master key system," explained Sales Director, Keiran McGovern.

"The challenge of the heritage work involved designing and fitting modern working hardware to older materials, we weren't able to change anything on the doors but still had to make them secure. We removed the cylinders and worked closely with our manufacturer to design several new key barrels to suit the heritage locks.

"We've been working with FDC over the last 15 years, currently we're installing a keying system to an FDC warehouse for TK Maxx at Sydney Business Park. TK Maxx is one of our biggest clients with over 75 stores nationwide, each with our master key system installed."



Independent Locksmiths & Security specialise in the design, supply and installation of comprehensive master key systems. The in house team uses innovative technology, including Cloud based access control systems, and will build, monitor and maintain networks for data systems. They also install safes, intercoms, alarms and CCTV.

"We pride ourselves on service," said Keiran. "Celebrating nearly 50 years in business, we have long standing partnerships with some of Australia's most iconic brands, Westfields, Woolworths, Telstra, Transgrid NSW Health and Sydney Zoo working with a diverse range of security requirements."

For more information contact Independent Locksmiths & Security, 552/560 Church Street, Parramatta NSW 2151, phone 1300 500 600, email service@independentlocksmiths.com.au, website independentlocksmiths.com.au



QUALITY CARPENTRY

Starting at the WSSH in June 2021, Xcel carpentry carried out structural works, framing the floor and veranda roof and strengthening the existing structure. The scope of works also included the installation of new recycled timber flooring, the repair and refurbishment of existing timber floors and the construction of timber decking and seating. Window frames and timber ceilings as well as internal and external timber linings were rectified or replaced to match existing materials.

“Most of the job involved working from the original heritage design and matching the existing materials. We used recycled blackbutt for the floors, ceilings and decks and custom-made cedar for the barge boards. Lead times of materials became challenging at times,” said Director, Jesse Burns. “Xcel Carpentry have a successful working relationship with FDC, we’ve been with them at major developments. In late 2021 we finished a two-year contract with FDC at Macquarie University installing external decking, furniture and stairs. We had a defect free handover and completed the job in front of all programme deadlines.”

“In April 2022, we finished at the Log Cabin in Penrith where we installed Millboard Decking, internal wall panelling, flooring and handrails as well as aluminium battens. We’re proud of this job and have received plenty of compliments for our work. This is the first

pub we have completed and already we have another pub project under FDC, the Calderwood Tavern.”

Sydney based, Xcel Carpentry work across the commercial and residential sectors with plans to expand interstate.

“Xcel are striving to move towards a green future, we are putting a large emphasis on Mass timber construction. Currently we are completing a CLT building at Oakhill collage, with a plan to further expand into this market. We aspire to become one of the leading carpentry companies in the commercial sector,” added Managing Director, Zac Burns.

For more information contact Xcel Carpentry & Construction, 13/62 Argyle Street, South Windsor NSW 2756, phone 1300 932 522, email info@xcelcc.com.au, website xcelcc.com.au

