

BUILDING THE FUTURE OF RETAIL

Mainbrace's extension and refurbishment has brought new life to DFO Homebush in Sydney.

MAIN CONSTRUCTION COMPANY : Mainbrace Constructions
CLIENT : Colonial First State Property Management NSW
CONSTRUCTION VALUE : \$65.8 million
COMPLETION DATE : June 2014
ARCHITECT : The Buchan Group
ENGINEERS : Brown Consulting Pty Ltd

Doubling the floor plate and adding more than 1100 car spaces has completely changed the dynamic of Sydney's largest and busiest outlet centre.

Detailed staging, extensive traffic control, pedestrian management and emergency egress planning were just part of a highly successful solution.

The project comprised 37 stages. Scope of works included the creation of an entirely new floor below the existing trading floor and adding an additional 1183 car-spaces and 60 motorcycle spaces below that. The construction of a new 5 story multi-deck car park links the old parking to the new and facilitates much more effective traffic movement between levels.

Externally Mainbrace added roads and dock areas, while internally the circulation has received additional vertical movement zones providing a greater flow throughout the mall. To cap it off, the existing mall was completely refurbished and tenancies re-laid, including the creation of a premium mall space.

The entire project at a value of \$65.8 Million, was completed on the original completion dates without losing a single day of trade.

Mainbrace were awarded the 78-week design and construct contract in November 2012, with work commencing early December 2012 and contractual completion due in June 2014. For the base construction, staff on site ranged from 120 to 250 each day, with numbers increasing as the fitout reached its peak.

Mainbrace's focus and expertise in retail construction played a pivotal role in delivering a successful project on time. Of primary importance to the client was a safe site and remaining open for trade throughout the construction process.

As Project Manager Chris Coroneos comments, "Mainbrace have the experience and ability to effectively manage public interaction in works of this scale through detailed planning, staging, co-ordination and constant review. This upfront planning and execution was key to DFO and we were able to execute it successfully."

Choices in structural design were challenging but ultimately manifested both economical and

material saving benefits. New Level 1 bulky goods was a 20,000m² suspended slab cutting the 7m high basement in half vertically. Mainbrace's solution reused the existing concrete structural columns to tie to the new slab.

The northern façade had a complete makeover with the supply and installation of the new cantilevered external glazed window system.

Future use concepts drove ideals of more efficient use of energy. DFO has succeeded in improving and stabilizing the efficiency of the centre compared to more traditional buildings. A shared mechanical system along with LED hi-bay lighting over the retail tenancies and public areas is radical in a mall retail context, while a new skylight at the centre of building and the northern window floods the interior with daylight.

"The team at DFO have delivered an exceptional project. The complexity is too great to describe in a few words, but suffice to say they completed it all on the original date with an extremely happy client." Rob Doust – Managing Director.

Mainbrace are retail building experts. Having completed over 600 retail projects to date, this sector accounts for 85% of Mainbrace's work. Services offered cover a broad range of retail construction, from small upgrades to supermarkets and bulky goods rollouts as well as refurbishments and the construction of major retail infrastructure on greenfield sites.

Concurrent to the works at DFO Homebush, Mainbrace was completing Costco Casula, another prominent and large scale retail project. With an exceptionally quick 23 week start to open program, they were similarly able to bring this project to completion before Christmas trading.

Other current projects include The Ponds Shopping Centre in Sydney, Marian Town Centre in Mackay, Coles Bowral and the completion of Katoomba Marketplace. Mainbrace have been operating for 25 years, and maintain offices in NSW and QLD, with the ability to complete jobs across Australia.

For more information contact Mainbrace, phone 02 9438 1666, fax 02 9438 1777, website www.mainbrace.com.au



BEAUTIFUL CUSTOM TIMBER CEILINGS

While the word ‘Kamelasa’ reveals its meaning as a ‘faux-Danish’ word for their intriguing manner of speech, for this design company, the twists and turns of a language intonation could be analogous to breadth and complexity of creative ability in delivering custom ceilings as envisioned by their clients. A recent ceiling installation from Kamelasa for the DFO Homebush Homemaker Hub in Sydney provided an opportunity for this company’s ability to resolve complex technical issues and bring a vision to life.

With Mainbrace project managing the Homebush development, Kamelasa were given a design brief to create a custom architectural ceiling for the retail complex upgrade.

“We completed all the ceilings to the Premium Mall, which is at the entrance to the shopping complex. There was approximately 1.3km of custom timber fins, alternating in colour of white and metallic silver, with each fin being unique to its location. Capping the end of all the fins is a 260Lm custom veneered ribbon, with an LED light to the underside of it. The scope of works as such of what we installed – so basically two elements – the ribbon and the fins,” stated Marc Ryan, one of Kamelasa’s in-house design managers and director.

The design development for all custom work required a number of full size prototypes to be made, using the selected finishes. For this project, the construction of the prototype revealed the technical method of assembling the ceiling feature, with Kamelasa’s process involving rolled aluminium, pressing of

selected veneers and painting it. A full-scale prototype was installed earlier in the year and gave the client the assurance of getting exactly what they envisioned.

“The architects concept consisted of compounding curves, and there was nothing straight forward in that, and basically we had to create an internal structure which would then follow that form. We created a lightweight aluminium ladder, using rolled aluminium, and basically sheeted either side, with the a pressed veneer.”

The most complex part of the project was the veneered ribbon. The architect set us a goal for us to produce something exceptionally narrow and for us then to hold that form throughout the mall, following all these fins. It could be no thicker than 26mm and they gave us a height of 500mm, and within that they wanted veneer to either side and then an LED to the underside. So there was a lot of design development and prototyping for that to come up with the right solution, which we did. And the end result’s really nice to look at.”

The final result was a thin ribbon installation that holds its form for the full 260Lm of the entry mall ceiling space. There are 5 ribbons in total, with the longest being 75m in length.

Kamelasa are located in Ultimo where they have their showroom and design office, with fabrication factory being attached to this space. The company has been in operation for 11 years, supplying and installing Barrisol ceilings, with Kamelasa being their trading name for more complex non barrisol custom designed ceilings.

“We are able to provide design development, documentation and through to fabrication and installation of custom difficult pieces – so that’s what we pride ourselves on here, working on custom projects,” states Marc.

With one of their next projects being for the Westin Hotel in Sydney, Kamelasa are excited to have a range of other projects in development crossing into all sectors – retail, commercial, hospitality, residential and education.

For more information contact Kamelasa, 449 Harris St, Ultimo, NSW 2007, phone 02 9660 6044, email design@kamelasa.com, website www.kamelasa.com





COMMUNICATION AS A METHOD OF DELIVERY

Communication is key for all relationships, and for the teamwork required on a building development, there is no difference. Filling a gap in the professional capacity of communication, accountability and overall interrelationships in the construction industry is NIX Management, a company that provides specialist project management service to any client who is looking to make a project happen.

“We manage all the interrelationships that occur within a project. On a project such as DFO it includes the builder, client, leasing, centre management, authorities, design disciplines, separate suppliers to the project and the public. And for those projects where clients are not experienced working within the building industry, we come in as specialist project managers, to deliver that end product for them” Stated Project Manager John Stalley.

For the DFO Homebush Homemaker Hub project, NIX Management was the representative project manager for Colonial First State Property Management as ultimate owners of the Centre, and were involved at every step from concept design through to tender, construction and now during defects liability period to end product.

Key delivery decisions included breaking down the process into a manageable number of 37 stages. Trading remained at maximum

capacity whilst upgrade of the existing retail outlet level was undertaken including concurrent construction of an additional bulky goods level, below the existing DFO retail. Similarly with the carpark, feasibility studies were carried out on 5 full design concepts, with the decision then made to run with the best option.

In keeping the existing carpark open, new levels were constructed in stages and when complete, interfaced with existing, whilst the original carpark continued its refurbishment in night shift staging. This meant that carparking stayed at serviceable numbers for continuous trade before the combined multi level carpark, interconnecting ramps and existing areas affected a total capacity in excess of 2020 spaces.

Founded in 1999 by Derek Nix, staff now number 15 in the company, with a wide range of development and construction building management skills & expertise amongst them. At any time, Nix Management have projects running within Australia & New Zealand from smaller fit-outs to large multi-million dollar developments such as DFO or Wet'n'Wild and can cater for everything in between.

For more information contact John Stalley, 17 Chuter Street, McMahon's Point, 2060 NSW, phone 02 9437 1300, website www.nix.net.au



SUCCESSFUL HANDLING IN ALL AREAS

For those looking to move mountains, **Simmons Civil Contracting is the company to seek out.** Testament to this was their involvement with the DFO Homebush Homemaker Hub project, where they were contracted by Mainbrace Constructions to undertake a site makeover. The popular shopping centre complex remained open for trading throughout the construction and Simmons Civil proved themselves to be greatly efficient at handling the sites complex dynamics, whilst bringing the project to completion.

Over the course of the project, Simmons Civil took care of everything from asphalt pavements, earthworks and stormwater works, to kerbs, gutters and concrete pavements. Additionally, they were responsible for concreting new roads within the site boundary and also overhead linkages across council roads. With a staff of roughly 20 people, Stage 1 of the project took approximately a year to complete, while Stage 2, the asphalt carpark at ground level, was finished in just two months.

While undertaking the construction on an active site, Simmons Civil were constantly cautious of limiting the public's exposure to any dangers, while also ensuring their work continued to move forward as timely as possible. Both the shopping centre's continuing trade as well as the stormwater works occurring outside the site boundary necessitated the scheduling of night works to cater for time and safety issues.

Nick Simmons, Managing Director of Simmons Civil, said: 'The key difference for this project was dealing with people every day and making their safety a priority, but also keeping the centre functional while we were using large machinery to do our works. So that was our challenge – it wasn't just an empty site, it was an operational site that was a busy shopping centre.'

Simmons Civil specialises in road construction, stormwater, pavements, industrial subdivision, residential subdivision and infrastructure works such as power, sewer, water, communication and gas installation. Their fleet of machinery includes excavators, bobcats, graders, dump trucks, rollers etc.

Catering to commercial, infrastructure and residential sectors, Simmons Civil has established a strong presence in commercial subdivisions as well as schools. Their success in all these sectors, including the project at DFO, evolved from an awareness of how the right communication is what keeps a project moving forward and builds workable relationships.

'Everyone from Mainbrace communicated really well with our guys and the project was very well organised. Programming and liaising with each other was done in just the right way to ensure the project went smoothly,' Simmons said.

With the completion of the DFO Homemaker Hub behind them, Simmons Civil are now working on several other major projects, including a 5-staged industrial subdivision at Gregory Hills. This project will see the installation of roads, kerbs, sewer, water and electrical across a 50 acre site. Additionally, they are involved with the construction of a new raceway track for cars and driver training at Luddenham Raceway, which will see Simmons Civil tackle all the pavements, stormwater, asphaltting, kerbs, gutters and carparking, as well as prepare the ground for various small building works.

For more information contact Simmons Civil, phone 02 9144 4020, website www.simmonscivil.com.au





FLOORS COVERING ALL AREAS OF EXCELLENCE

Creating other-worldly effects beneath one's feet is a speciality for the company Firmstone, sub-contracted by Mainbrace for the retail flooring in the refurbished DFO Homebush Homemaker Hub in Sydney. As one of the few companies in Australia capable of handling large areas of retail and commercial flooring, Firmstone caters to all preparation, levelling and epoxy flooring with specialised results with Sika products.

After receiving the artists' impression from the architects representing a floor covered with swirling silvery clouds and starry galaxies for the DFO Hub, Firmstone ignited their creative and technical expertise to emulate the

drawing. Working in collaboration with their supplier Sika, Firmstone selected colours of silver and grey metallic dust or shards, which were then mixed into their specialised product of Sika self-levelling epoxy.

The DFO project involved a floor covering of approximately 1200m². Working in areas of 300m², the floor was vacuum ground, and then primed with Sikafloor 160. Sikafloor 160, together with the decorative shards and dust, was then put down as a self-leveller at 2-3mm in thickness. As the epoxy flowed and the 40-minute curing process began, the shards settled and created the desired metallic cloud patterns with a translucent 3D effect.

Sikafloor 160 is a 2-part solvent free epoxy primer and binder, modular Sikafloor system, and has been used in past projects such as the MCG and SCG flooring, as well as Perth Arena.

Having successfully worked together on many large projects before, Sika and Firmstone's extensive experience and partnership as supplier and applicator, has, yet again, created a showcase result with the largest commercial/retail floor of this nature.

Floor preparation is the key to any resulting masterpiece, and plays a major part of Firmstone's work. Originally based on its expertise with Floor preparation 40 years

in the making, Firmstone has been in an excellent position from this basis to expand its expertise through to other areas, including Epoxy work, self levelling, water proofing and polished concrete. For the DFO Homebush project, floor preparation involved grinding the whole area of the concrete slab with planetary grinders in order to remove undulations and existing floor coatings.

As one of the largest floor preparation companies in Australia, grinding, scarifying and shot-blasting is one of Firmstone's core offerings. As a result, the high investment made in the range of equipment allows Firmstone the flexibility to cater for the larger jobs to be done quickly and within project specification. For example - 3-tonne ride-on shot blasters, and four-tonne ride on scarifiers, are all vacuumised.

All of our jobs are vacuumised so there is never a problem with dust which is often a key issue for our clients.

Founded in 1976, Sika Australia is a specialty chemical supplier for the building and construction industry. Their product line includes high-quality concrete admixtures, specialty mortars, sealants and adhesives, damping and reinforcing materials, structural strengthening systems, industrial flooring, as well as roofing and waterproofing systems. Firmstone works in collaboration with their supplier Sika to create and deliver the exact product solution for whether it is for an architect or builder.

Other works recently completed by Firmstone with Sika products include 2,000sqm of epoxy

at the SCG, 2,000sqm of chemical resistant polyurethane cement for Nestle and 3,000sqm of polished concrete at White Bay Passenger Terminal for the Ports Authority.

For more information contact Sika Australia, 55 Elizabeth Street, Wetherill Park, NSW 2164, phone 1300 22 33 48, email au.marketing@au.sika.com, web www.aus.sika.com

For more information contact Managing Director, Peter Cook at Firmstone Flooring Specialists, 212 George St, Concord West, NSW 2138, phone 0419 998 919 or website www.firmstones.com.au.



STEEL FABRICATORS GET CREATIVE FOR SHOPPING COMPLEX

Creating the structural framework for the new and upgraded spaces of the DFO Homebush Homemaker Hub refurbishment was a challenge in both time and mobility for the sub-contractors Marko Welding & Sons. The company's long-standing experience with retail projects left them in good stead to handle both the precisely staged upgrade and also working with existing building access constraints.

The DFO upgrade involved a shift in existing building areas to be tenanted and included a new addition, an expanded basement carpark, and a general refurbishment of the shopping complex. Marko Welding & Sons were sub-contracted to supply and fabricate all structural steel as well as manufacture other metalwork such as balustrades, hand-rails and fire stairs for the project.

With numerous issues informing the projects evolution, a particular challenge arose with the need to bring equipment and steel components into confined spaces such as the basement carpark. Requiring a constant dialogue with Mainbrace project engineers for best methodology, Marko Welding & Sons demonstrated their professionalism by working in collaboration for this aspect of the project. Due to the continued

operating of the shopping centre and a strict programme of staged works, constraints in space and time meant as much pre-fabrication of structure as possible was needed. Marko Welding & Sons therefore went onto site and carried out all measurements when allowed access, then immediately got onto the shop-drawings. With time precision at the forefront, as soon as shop-drawings were completed, fabrication began.

With 15 members to their team, and over 30 years of service to the industry, Marko Welding & Sons provides a high level of services in steel fabrication for retail, industrial and commercial scale projects. Located in Smithfield, the company has a number of projects around NSW currently underway, including Carlingford First-Choice Liquor and Katoomba Market Place.



For more information contact Marko Welding & Sons, 11 Hume Road, Smithfield, NSW, 2164, phone 02 9604 6840

PREMIUM SIPHONIC DRAINAGE SOLUTIONS

At the recent Homemaker DFO project in Sydney, Ultraflow Siphonics were engaged to analyse, update and improve the existing inferior roof drainage system. The client needed a company that could deliver an adaptive solution, while working in difficult areas to an incredibly tight construction program. Ultraflow Siphonics utilise the original Scandinavian siphonic drainage system; a sophisticated engineering solution adapted to suit Australian conditions.

With a roof area of around 7,000 square metres, Ultraflow replaced 40 existing roof outlets and pipework to accommodate a 1 in 100 year rainfall event. As a part of their solution, they connected the systems to a 500,000 litre existing in-ground tank located over 150 metres from the existing downpipes. The capture of all the rainwater has given this building an environment advantage over other similar buildings. After conducting a detailed survey of the existing pipework, Ultraflow were able to reuse about 85% of the high-level collection pipes whilst still provide a greater capacity for rainwater harvesting at the site.

A challenge in any installation is coordinating with the other services on site. DFO Homebush had additional coordination requirements. Tenancies needed to continue to trade during normal hours without the

interruption from construction works. Ultraflow's team worked in 3-4 hour shifts both before and after trading hours to ensure swift delivery of the project with minimal disruption. Further challenges included the utilisation of specialist access equipment to reach intricate areas as well as manoeuvring 150 metres of new large bore pipes through the level 1 carpark to reach the in-ground rainwater harvesting tank.

Located in Sydney NSW, Ultraflow was established in 1995 and winner of the Service Business of the Year in 2013 at the Entourage Awards. Best practice would be to connect with Ultraflow at the concept stage of any building project, enabling them to deliver the most efficient and best designed solution available. Ultraflow are currently working on the retrofit of Tonsley Park in SA, formerly the Adelaide Mitsubishi plant with over 12,000 metres of siphonic pipework.



For more information contact Ultraflow, phone 02 9482 1256, website www.ultraflow.com.au



GENERATING BRIGHT IDEAS

The process of adaptation and re-use of a retail outlet is an invitation to bring new life and activity to one of modern societies busiest spaces. A key difference in the engineering services from ADP Consulting is their ability to think outside the square and find both economical and environmentally engineered solutions. Their consultancy for Mainbrace on the DFO Homebush Homemaker Hub refurbishment successfully demonstrates the bright new ideas generating from this firm.

Utilising the existing building shell, ADP Consulting designed and reconfigured the mechanical, electrical, fire and hydraulic systems, and included the construction of an intermediate structural level into the building, turning two levels into three. The creation of a new carpark on the ground floor was part of the job scope, while the locating of a new bulky goods on the middle infill level allowed a refurbishment of the upper floors with DFO type tenancies.

Early stages for this project involved a detailed assessment of the all existing services and a considered selection of those that could be

retained, and those that could not. The project was made complex by the fact that services were in areas of the building that were to be retained as well as areas being demolished and it was here that design decisions for either re-use or removal of the old and the new services were met.

ADP Consulting has offices in Melbourne and Sydney, with both offices working together to provide the best team for each project. With ESD principles at the forefront of their engineering solutions, retail shopping centres have become a focus area for this consultancy, as have a number of other industry sectors including commercial, healthcare, industrial and residential. Recent other retail work includes Werribee Shopping Centre in Melbourne, Castle Towers Redevelopment in NSW, and Cranbourne Park Shopping Centre in VIC.

For more information contact ADP Consulting, Level 1, 460 Pacific Highway, St Leonards, NSW 2065, phone 02 8203 5447, email contact@adpconsulting.com.au, website www.adpconsulting.com.au

HANDRAILS YOU CAN LEAN ON

The staircase in the story of architecture has long been celebrated as a particular moment in the experience within a building. In the modern day shopping centre, such shared circulation spaces retain their importance. For DFO Homebush Homemaker Hub, the stairs and void balconies are outlined by stainless steel and glass balustrades from Elite Balustrades, a recognised balustrades company that cover jobs from retail, educational, and residential developments across NSW.

Working to the Australian Standards for strength and other requirements, Elite Balustrades developed the design brief from Mainbrace, then fabricated and installed the balustrades around the escalator voids on the central and northern stairs of the Premium Mall. Providing the perfect neutral backdrop to a highly colourful Premium Mall space, the challenge for this job was the exposed stainless steel flashing that was required as part of the balustrade system. Installed around the entire edge of the floor slabs, the stainless steel flashing remained a highly visible element, requiring each piece to be individually cut to ensure a clean line finish.

With a factory in Smithfield, Elite Balustrades have for over 25 years diligently worked creating designs with their clients, as well as developing a number of standard balustrade systems. Working with both economics and design flair in equal parts, this company frequently alter elements of an existing system to suit a clients needs. Choice of material possible covers all types of stainless steel, steel, glass, and aluminium, as applicable for commercial, domestic and strata projects.

A large amount of Elite Balustrades work is with shopping centres, along with education facilities and residential developments. Current projects include UNSW for Richard Crookes Construction, St Josephs College at Hunters Hill, Prime Constructions for The Kings School at Parramatta, and University of Sydney for Buildcorp Constructions.

For more information contact Elite Balustrades, 24 Justin Street, Smithfield, NSW 2164, phone 02 9729 0500, fax 02 9729 3133, website www.elitebalustrades.com.au

