



CASE STUDY:

MCGREGOR COXALL
SYDNEY, AUSTRALIA



REVITALIZING THE SPACE “WHERE THE WATERS MEET”

For the Australian landscape architecture and urban design firm McGregor Coxall, a design has to be more than just a quick solution to a client’s existing problem. Realizing that approximately 70 percent of the world’s population will live in cities by the year 2050, Managing Director Adrian McGregor is clear that the built environment should respond to the needs of today, as well as prepare to combat issues that the population will face in the coming decades.

“ I’m passionate about the challenges that human beings are facing globally in terms of our environment, and I want to help cities grow in a sustainable way. ”

- Adrian McGregor

McGregor’s firm therefore uses design to bridge the gap between environment and development, and takes a multi-disciplinary approach to innovation and research-based project solutions. One example of how McGregor Coxall furthers their endeavor to build a more sustainable world is with one of their recent projects, the Parramatta River Urban Design Strategy.

Modern Parramatta, an Australian Aboriginal word for “head of the waters,” was founded in 1788 as a farming settlement that provided food for the growing urban port of Sydney 23 kilometers downriver. While Sydney’s metropolitan area grew to encompass Parramatta, the locale did not diminish in importance. Today, the Parramatta City Centre is Sydney’s second largest Central Business District (CBD) and the only one located on a riverfront, presenting a distinctive mix of opportunities and challenges for its development. McGregor Coxall’s Urban Design Strategy for the 31-hectare space is meant to reorient the district toward the river, connecting it to the Circular Quay area by ferry and positioning Parramatta Quay as the new water arrival point at the place where the Parramatta River runs into Sydney Harbor. The strategy aptly rebrands the location “Where the Waters Meet” and aims to revitalize the CBD through an innovative urban realm and four dynamic, mixed-use precincts along the water’s edge. The design creates an active waterfront where the city can celebrate its public life.

URBAN DEVELOPMENT MEETS ENVIRONMENTAL CONSCIOUSNESS

The firm analyzed the area's heritage items and cultural assets, as well as its open spaces and ecology, in order to create a design that would incorporate both the urban and environmental needs of the Parramatta City Centre. The district is currently experiencing economic, demographic, and physical growth, so one of McGregor Coxall's main goals was to create a space that engaged the public and encouraged pedestrian travel. To accomplish this, the firm designed the new waterfront commercial district within the river's flood zone, bringing it close to the water level to create activation inside the Parramatta flood corridor.

Using flood resilience concepts working successfully in Hamburg, Germany's HafenCity, the design team created walkways, termed "Water Streets," that connect the urban areas of the city to the riverfront. These Water Streets will integrate public art, water sculpture, and water-sensitive urban design initiatives. Once city-goers reach the river itself, they'll find a variety of public spaces for events, recreation, shopping, dining, art, and culture, as well as easy access to the pre-existing attractions of the area. New medium-rise apartment buildings will also allow for community growth within the city center, contributing to the expansion of the vibrant area.



McGregor Coxall's community-centric approach means that they don't simply keep the end users of their projects in mind during the creative process; rather, they engage with them to produce more informed designs. This means that while the official client for the project is the city government, the firm consulted with the people of Parramatta to understand what they wanted most from their riverfront. "We're working with the community and the stakeholders to create a very broad, deep conversation with the city as a whole," says McGregor. "It's allowing us to deliver what I think is going to be an important and fantastic project where landscape architecture is shaping the urban environment. We even developed our own web software called 'yourplan' to engage with citizens and communities on our projects."

McGregor Coxall matches the value they place on public feedback with their dedication to environmental sustainability. The Urban Design Strategy incorporates many precinct-scale green engineering elements that will help the area thrive into the future, making it resilient to the effects of climate change and encouraging ecological growth. The development of the riverfront is designed to withstand flooding of up to three meters to accommodate sea-level rise.

The plan also calls for the movement of existing weirs and quays in order to shift the location of where the freshwater of the Parramatta River hits the saltwater of Sydney Harbor, which works to restore and improve the aquatic ecology of the area. The design further enhances the river's ecosystem by introducing water cycle management and water-sensitive urban design. The strategy calls for restoring a natural form to the connected Brickfield Creek channel outlet by creating vegetated banks, incorporating stormwater treatment systems on both sides of the river, and capturing storm- and wastewater for non-potable purposes in the new developments. Designers at McGregor Coxall understand that while a design's aesthetic is important, so is its environmental impact. McGregor notes, "there's a commitment to the quality of the work that we do and also to the legacy that we leave."



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earned more
than 60 awards.

Making an Impression Around the World

McGregor Coxall has indeed made a name for itself in the landscape architecture and urban planning industries, completing over 300 projects across Australia, Europe, and Asia. Their work has earned more than 60 awards, including the prestigious *Topos Journal* International Landscape Architecture Practice of the Year, landscape's highest international prize, which honored McGregor Coxall as a proponent of a new wave of environmentally focused landscape architecture, framed within a modernist design approach. Their work on the Parramatta River Urban Design Strategy earned the firm several distinctions including the Australian Institute of Landscape Architects' New South Wales Chapter's Award for Urban Design, as well as the Planning Institute of Australia's National Award for Urban Design; the Australia Award for Urban Design: Policies, Programs and Concepts - Small Scale; and the Prime Minister's Australia Award for Urban Design. To achieve such international acclaim and local distinction, McGregor Coxall relies on the 3D modeling and site design tools within Vectorworks® Landmark software.



“We’re really happy with the ability to model large scale environments in Vectorworks and then move into detail with the same software program, allowing us to develop very complex and large 3D documentation packages, create planting plans, and generate worksheets from those plans in order to specify quantities and material takeoffs,” says McGregor. “I also like its graphical abilities. I love that we can use textures and gradients to create really great looking sets of drawings simply through a graphics process.” The firm also uses Vectorworks Landmark software for its extensive geographical information system (GIS) capabilities. “We do some very large projects in terms of sheer physical size, which requires us to import a vast amount of GIS data and can become extremely complex. Landmark lets us incorporate all of that data easily, so that we can focus on design.”

McGregor sees design software as more than a tool to create the built environment; it’s also a way to more efficiently and accurately protect the planet. “I think that one of the great global trends that we have now is a shift toward low-carbon economies where there’s a price on the carbon that’s released into the atmosphere, so it has a value,” he says. “Carbon is now traded as a commodity, and it is unlocking a global market for new renewable energy technologies. Cities are in a rapid state of change that is as big as the Industrial Revolution. The software we use has to be intelligent in terms of our carbon footprint modeling. With intelligent BIM, smart symbols, and coordinated worksheets, Landmark gives us the ability to make this happen.”

BE INSPIRED

Read about more designers who transform the world with Vectorworks Landmark software at www.vectorworks.net/success-stories.

ACKNOWLEDGMENTS

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