

(PROJECT)

THE KUNSHAN PROJECTS

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THE

INTERDISCIPLINARY IMPACT OF CREATIVE PRACTICE RESEARCH (SYMPOSIUM)

(VENUE) MADA, MONASH UNIVERSITY





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01. Diagram of New Water System: Water Production Done By Architects Team, Kunshan Project I, 2015 02. Aerial Image of Existing Site Condition Done By Architects Team, Kunshan Project I, 2015 03. Strategic Plan Done By Architects Team, Kunshan Project I, 2015 04. Render of Food Production Done By Architects Team, Kunshan Project I, 2015 05. Render of Social Production Done By Architects Team, Kunshan Project I, 2015 06. Render of Green Edge Done By Architects Team, Kunshan Project II, 2016 07. Render of Water Edge Done By Architects Team, Kunshan Project II, 2016 08. Render of Water Courtyards Done By Architects Team, Kunshan Project II, 2016 09. Diagram of Water System Strategies Done By Architects, Maud Cassaignau And Markus Jung, 2017



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WATER URBANISM

CONTEXT_

Due to rapid urbanization, the impacts of water pollution, water shortages and flooding have appeared with greater intensity in China, sparking government interest in forward-thinking mitigation strategies and the development of a national 'Sponge City' policy. The Kunshan studios form part of an ongoing research collaboration between the Collaborative Research Centre for Water Sensitive Cities (CRCWSC) and Monash University's Architectural program (MADA) exploring water-sensitive urban design and resilient precincts for a Chinese urban context.

PRACTICE LED DESIGN-RESEARCH_ Exploring integrative concepts of water reuse at urban scale, the projects aimed to deliver site-based responses.

The trans-disciplinary real time projects rethink the notion of urban ecology by integrating concepts and expertise from water engineering, landscape architecture, ecology, sociology, climate engineering, architecture, urban and landscape planning. Informed by these various inputs, the design studio process was crucial component of revealing how water systems can extend beyond their technical function to generate new spatial qualities and potentials in contemporary urban contexts. Water reservoirs became urban features within a new civic realm, while wetland systems were transformed into urban parks and gardens. These elements have the potential to reconnect the city's urban fabric to a broader ecological framework and a cultural heritage of water canals, building the foundations for a citywide water purification system.

Project I

The first project rethinks a large un-built city area, currently occupied by rice farming. How can such a green-field area develop, while keeping the existing water infrastructure and complementing it with purification wetlands and urban farming? The upgraded water system forms the structuring element for new high-density urban precincts. It serves different purposes: for cooling, flood control, as water resource, eco-system, for recreation and circulation. The collaboration with engineers allowed quantifying demand and calibrating systems to cover the water and agricultural needs for the whole city center of Kunshan.

Project II_

The second project rethinks a smaller industrial wasteland. It investigates how water-purifying systems could be integrated within urban form. As the site is bordering different urban conditions, one side is devised to integrate an urban park with diverse public programs as well as wetlands, while the other integrates bio-filtration systems within built forms.

IMPACT Award

The CRCWSC were presented with the Award for Excellence in Innovation at the 2017 CRC Association Conference in Canberra. The Kunshan Projects were used as key examples of the CRCs impactful work in China. Publications

The Kunshan Projects are published in the current issue of "Inflection, Volume 03: New Order" with the article "Sponge City" and in the "AASA_Project to Practice: Innovating Architecture" conference proceedings with the article: "Water Responsive Urbanism As A Driver For Academic Design Innovation."

Thus, investing in well-designed water infrastructure becomes an investment in public space.

PROJECTS I+II_

In both projects, while operating at different scales, the water systems (including wetlands and bio-filtration) purify the water and work as flood control, water reservoirs, climate mitigation device, transportation system, and spaces for active and passive recreation and as ecological corridors.

COLLABORATORS

Department of Architecture, Monash University_Architects & urban designers_M. Jung, M. Cassaignau, D. Ramirez-Lovering, 28 Monash architecture students Collaborative Research Centre for Water Sensitive Cities_ Engineers: Water, Climate, Ecology, Resources Managmt._ J. Wang, N. Tapper, P. Breen, T. Wong Realmstudios_Landscape architect_J. Shinkfield

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