



STATE OF AUSTRALASIAN CITIES CONFERENCE 2025

9–12 December Brisbane, Queensland

HDR Symposium Abstract Book

PREPARED BY:



SUNDAY 7 DECEMBER

HDR SYMPOSIUM (DAY 1)

8.30am - 5.00pm	Registration Desk Open						
9.00am - 10.30am	Symposium Opening Chair: Sara Alidoust						
9.00am - 9.10am	Acknowledgement of Country Sara Alidoust, The University of Queensland						
9.10am - 9.30am	Symposium Opening Sara Alidoust, The University of Queensland						
9.30am - 10.30am	Keynote 1 Mirko Guaralda, Queensland University of Technology						
10.30am - 11.00am	Morning Tea						
11.00am - 12.30pm	Networking Session Chair: Sara Alidoust, Mirko Guaralda						
12.30pm - 1.30pm	Lunch						
1.30pm - 3.00pm	HDR Master class 1 Chair: Sara Alidoust						
3.00pm - 3.30pm	Afternoon Tea						
3.30pm - 4.30pm	Meet the Mentors						
Room	HDR1A: Group A P413	HDR1B: Group B P413a	HDR1C: Group C P504	HDR1D: Group D P505	HDR1E: Group E P506	HDR1F: Group F P506a	HDR1G: Group G P419
Mentors	Prof Carl Grodach Dr Natalie Osborne	Dr Hayley Henderson	Dr Mark Limb	A/Prof Crystal Legacy Dr Annah Piggott-McKellar	Prof Kristian Ruming	Prof Jason Byrne A/Prof Debra Flanders Cushing	Prof Jago Dodson
Participants	All Group A HDR Presenters	All Group B HDR Presenters	All Group C HDR Presenters	All Group D HDR Presenters	All Group E HDR Presenters	All Group F HDR Presenters	All Group G HDR Presenters
END OF DAY							

MONDAY 8 DECEMBER

HDR SYMPOSIUM (DAY 2)

8.30am - 5.00pm	Registration Desk Open						
9.00am - 10.30am	Student Presentations Session 1						
Room	HDR2A: Group A P413	HDR2B: Group B P413a	HDR2C: Group C P504	HDR2D: Group D P505	HDR2E: Group E P506	HDR2F: Group F P506a	HDR2G: Group G P419
Mentors	Prof Carl Grodach Dr Natalie Osborne	Dr Hayley Henderson Dr Sara Rashidian	Dr Mark Limb	A/Prof Crystal Legacy Dr Annah Piggott-McKellar	Prof Kristian Ruming	Prof Jason Byrne A/Prof Debra Flanders Cushing	Prof Jago Dodson
Other Participants	All Group A HDR Presenters	All Group B HDR Presenters	All Group C HDR Presenters	All Group D HDR Presenters	All Group E HDR Presenters	All Group F HDR Presenters	All Group G HDR Presenters
9.00am - 9.15am	Symbolic morphologies: built form and religion in Sylhet City, Bangladesh	Designing for whom?: Diverging expert and community visions of security in the urban public realm	Bridging the gap: Aligning spatial and railway development plans in New Zealand	Planning for health and wellbeing in high-rise precincts: Understanding the influence of precinct urban geometry	Classifying barriers to integrating affordable housing and Transit-Oriented Development (TOD): A Systematic Literature Review	Reframing urban green space access: A spatial-perceptual analysis in Liverpool, Sydney	What Drives Coastal Adaptation Policy?
9.15am - 9.30am	Sayed Ahmed University of New England	Codee Ludbey University of Technology Sydney	Behnaz Shaabani University of Auckland	Helen Caswell The University of Queensland	Mohammad Ali Ashouri Dahnesari University of Auckland	Yuan Qi University of Technology Sydney	Suhyun An Griffith University
9.30am - 9.45am	Tom Ward Uppsala University / The University of Melbourne	Ruoxin Liu The University of Melbourne	Shabnam Varzeshi RMIT University	Jialing Xie University of Sydney	Sophie Barford Vuilleumier Griffith University	Hannah Thwaites Flinders University	Katherine Booker University of Waikato/University of Canterbury
9.45am - 10.00am	Cecilia Brazoli University of Milan	Kevin Cherian The University of New South Wales	Willem Van Wyk University of New South Wales	Pouya Molaei RMIT University	Farzaneh Janakipour The University of Melbourne	Lu Jin The University of Queensland	Dwiyanti Kusumaningrum The University of Melbourne
10.00am - 10.15am	Asees Prab RMIT University	Sevgim Pekdemir Queensland University of Technology	Ngoc Thao Linh Dang Monash University	Yassin Nooradini The University of Queensland	Sara Pishgahi RMIT University	Hongming Yan University of Technology Sydney	Afrida Afroz Rahman The University of Melbourne
10.15am - 10.30am	Q&A	Q&A	The redevelopment of former golf courses: Examining stakeholder collaboration and conflict resolution. Jessica Morcombe Bond University	Q&A	Assessing policy impacts on long-term rental prices from short-term rental regulations: Airbnb in Sydney study Alexei Roudnitski University of Sydney	Qualities of inclusive urban green spaces: Exploring migrant and non-migrant perspectives from Wellington, New Zealand Golkou Giyahchi Victoria University of Wellington	Flood disasters in Peru: Strengths and opportunities in collaborative multilevel governance for disaster risk reduction Cristina Wong RMIT University
10.30am - 11.00am	Morning Tea						

MONDAY 8 DECEMBER							
HDR SYMPOSIUM (DAY 2) - CONTINUED							
11.00am - 12.30pm		Student Presentations Session 2					
	HDR3A: Group A P413	HDR3B: Group B P413a	HDR3C: Group C P504	HDR3D: Group D P505	HDR3E: Group E P506	HDR3F: Group F P506a	HDR3G: Group G P419
Room	Prof Carl Grodach	Dr Hayley Henderson	Dr Mark Limb	A/Prof Crystal Legacy	Prof Kristian Ruming	Prof Jason Byrne	Prof Jago Dodson
Mentors	Dr Natalie Osborne	Dr Sara Rashidian		Dr Annah Piggott-McKellar		A/Prof Debra Flanders Cushing	
Other Participants	All Group A HDR Presenters	All Group B HDR Presenters	All Group C HDR Presenters	All Group D HDR Presenters	All Group E HDR Presenters	All Group F HDR Presenters	All Group G HDR Presenters
11.00am - 11.15am	The remittance architecture: How spatial perception of transnational migrants are changing vernacular settlement of Bangladesh Kawshik Saha The University of Melbourne	Evaluating sustainability tools through meta-indicators: An empirical study of diverse Australian neighbourhoods Tayyaba Riaz Griffith University	Measuring TOD performance in the present and future: Towards successful transit-oriented development in Greater Sydney Yiling Lin UNSW	Mapping the knowledge domains of social studies in the field of smart city Atefeh Malekshani University of Auckland	Developer behaviour, housing, and natural hazard risk Joel Bishop University of Waikato	Valuing urban greenery in Christchurch city centre: Advancing sustainable housing, resilience, and community cohesion post-earthquakes Akram Fatourehchishabestari The University of Auckland	Developing collaborative governance frameworks with a systems thinking approach for managing water in changing climate Jenelle Bartlett Griffith University
11.15am - 11.30am	Finding the legacies of historical planning decisions in modern neighbourhood land use patterns Nick McFarlane RMIT University	Walking vs Vending?: Relationship between informal street vending and urban walkability Eka Darma Kusuma The University of Melbourne	Unpacking 50 years of metropolitan planning decisions - a Sydney case study Nicole Campbell Western Sydney University	Infrastructure integration for smart and sustainable electric urban mobility Niklas Tilly Queensland University of Technology	Infrastructures of care and housing affordability: The everyday experiences of low-income older women Farhana Akther RMIT University	Developing a climate resilient framework for healthy cities Jyoti Nisha The University of Queensland	Making invisible visible: Exploring 'unexpected collaborations' in urban life through feral ecologies Busra Ustundag Queensland University of Technology
11.30am - 11.45am	Reimagining smart cities: Integrating Indigenous TEK principles into sustainable urban design for Brisbane Kimberley Harding Queensland University of Technology	Beyond proximity: mapping daily routines to enhance green space equity at the block scale Ruihong Jiao Queensland University of Technology	Setting a High-Bar: Using the Olympic and Paralympic Games to decarbonise urban transport Anais Fabre Griffith University	Enhancing governance of land use and transport integration Rafsan Hossain Monash University	Housing as a feminist issue Nadia Zaini The University of Queensland	Who are parks really for? Rethinking user recognition in green space planning Yuan Lu The University of Melbourne	Reimagining the capital: A feminist planning framework for building an inclusive and sustainable Nusantara Krismiyati Krismiyati The University of Queensland
11.45am - 12.00pm	Recognising pluralist land ontologies: Exploring tensions between Indigenous and Western land administration in Australia Roman Aizengendler RMIT University	AI-Enhanced participatory urban design: Rethinking Brisbane's case of micromobility Tommy Nguyen The University of Queensland	Exploring planning institutions' perspective on social inclusion in the context of Delhi's urban villages Pranavi Kasula Griffith University	The impact of high-density housing on public transport use Mehdi Alidadi RMIT University	Where two Songlines meet: Regenerative urbanism and net zero innovation at Curtin Exchange precinct Issana Meria Burhan Curtin University	Evaluating the strengths of multiple pathways linking urban green space to cardiovascular mortality Lu Cao The University of Melbourne	Shaping tomorrow's regions: A systematic review of industry 4.0's role in regional development Soroush Khalili University of Auckland
12.00pm - 12.15pm		Socio-spatial manifestations of Industrial Parks in Ghana: Location, land use and impact analysis Q&A		How does one model a regional mega-event? Developing a methodological framework for the Brisbane 2032 Q&A		Cooling with justice: A configuration-based governance framework for urban heat resilience Q&A	Understanding sustainability from a local governance perspective Q&A
		Daniel Amenuvor University of Melbourne		Muhammad Usman Haider Griffith University		Amir Hossein Pakizeh University of Sydney	Ji Xu Monash University
12.00pm - 12.15pm	Q&A						
1.30pm - 3.00pm	HDR Panel Discussion 1						
	Chair: Sabina Andron						
	Networking as Research Skill? Stories from PhDs and ECRs						
	Moderator: Sabina Andron, AECURN Chair / University of Melbourne						
	Panelist: Akram Fatourehchishabestari, AECURN Committee / University of Auckland						
	Panelist: Laura Goh, AECURN Committee / University of New South Wales						
	Panelist: Shabnam Varshezi, AECURN Committee / RMIT University						
	Panelist: Dr Salene Schloffel-Armstrong, AECURN Committee / University of Auckland						
	Panelist: Dr Joanne Choueiri, Queensland University of Technology						
3.00pm - 3.30pm	Afternoon Tea						
3.30pm - 5.30pm	HDR Master class 2 (Part 1)						
	Facilitator: Jason Byrne & Pooja Shah						
	Urban Heat Equity Workshop						
	END OF DAY						

TUESDAY 9 DECEMBER							
HDR SYMPOSIUM (DAY 3)							
8.30am - 5.00pm	Registration Desk Open						
9.00am - 10.30am	Topic Discussions						
	HDR4A: Group A P413	HDR4B: Group B P413a	HDR4C: Group C P504	HDR4D: Group D P505	HDR4E: Group E P506	HDR4F: Group F P506a	HDR4G: Group G P419
Room	Prof Carl Grodach	Dr Hayley Henderson	Dr Mark Limb	A/Prof Crystal Legacy	Prof Kristian Ruming	Prof Jason Byrne	Prof Jago Dodson
Mentors	Dr Natalie Osborne	Dr Sara Rashidian		Dr Annah Piggott-McKellar		A/Prof Debra Flanders Cushing	
Other Participants	All Group A HDR Presenters All Group B HDR Presenters All Group C HDR Presenters All Group D HDR Presenters All Group E HDR Presenters All Group F HDR Presenters All Group G HDR Presenters						
10.30am - 11.00am	Morning Tea						
11.00am - 12.30pm	HDR Panel Discussion 2 & Symposium Close						
	Chair: Iain White					Room: P421	
11.00am - 12.00pm	PhD Transitions: Preparing for What's Next Moderator: Iain White, Univeristy of Waikato Panelist: Dr Frank Zou, The University of Queensland Panelist: Dr Sylvie Chell, Griffith University Panelist: Dr Kavita Gonsalves, Populous Panelist: Dr Matthew Hutchinson, Peddle Thorp						
12.00pm - 12.10pm	Closing of Symposium Sara Alidoust, The University of Queensland						
12.10pm - 12.30pm	Light lunch						
1.00pm - 3.00pm	HDR Master class 2 (Part 2)						
	Facilitators: Jason Byrne & Pooja Shah					Room: P413	
	Urban Heat Equity Workshop						
END OF HDR SYMPOSIUM							

Symbolic morphologies: built form and religion in Sylhet City, Bangladesh

Mr Sayed Ahmed¹¹University of New England

HDR 2A, P413, December 8, 2025, 09:00 - 10:30

Sylhet's sacred activities in its public realm have transformed the city image into a holy city or spiritual capital, with its unique, dynamic, and informal practices arising from the spatiality of the sacred sites and everyday practices of inhabitants having bases in folk culture. For example, Muslim associations with saints' tombs have roots in folk culture, while Hindus deviate from religious theology with a tribal and neoliberal mixture of culture, and the interaction of two mainstream religions is the subject of both conflict and cooperation. Urban morphology and symbolic sacralization in South Asian cities like Sylhet are interrelated, while such relationships are often overlooked by Western researchers, as they are also not hopeful about the future of religion. Religion's presence in public spaces impacts spatial practices as vital nutrients for survival, even in contemporary everyday life. However, despite extensive research on urban morphology and religion separately, there is very limited literature to capture religious perceptions and experiences in urban spaces from the same platform. This research aims to fill an existing gap on third-world contexts, which also comprises its novelty, but using western sociological and philosophical tools (mainly Baudrillard) never highlighted before. The methodology of the research will map key morphological and religious variables in the city, which might include festival trajectories, street life observations, pedestrian densities, informal and formal religious activities, public and private interface types with religious commodification, and the identification of blurred boundaries between sacred and profane on smaller to broader urban scales. To relate the derived cartography, illustrative (not representative) interviews with inhabitants about religious signs and symbols will be conducted, coded, and compared accordingly. The possible findings will try to find how urban morphology influences sacred experiences while consecrated entities and religious activities shape the city's structure in return.



Situating the mural economy: articulating walls as sites of capital

Tom Ward¹

¹Uppsala University, ²The University of Melbourne

HDR 2A, P413, December 8, 2025, 09:00 - 10:30

This paper argues that by examining the development of the hand-painted advertising (HPA) industry in London, visual traces of rentier modes of capitalism can be evidenced, bringing to the fore the aesthetic and cultural impacts of contemporary economic processes that are shaping cities today.

Taking root in the street art scene, the rapidly growing HPA industry is responsible for a large increase in advertising murals in London; walls once the site of street art are now often painted with large photorealistic advertising pieces, marking a shift in the aesthetic profile of the city. Scrutinising the development of this industry, this paper, drawing upon fifty qualitative interviews, makes two arguments to account for this aesthetic shift. Firstly, it positions the growth of HPA as structured within a rentier economy, in which walls have become assetised and, thus, lucrative sources of income for landlords, where once they yielded no rent. The increased value of walls conveniently facilitates an aesthetic defence of property, whereby HPA is supported and graffiti and street art become a visual threat to the expanding 'rentability' of the urban form. Secondly, the paper argues that this increase in the value of walls has aesthetic consequences, not only for the urban form, but also for the street art culture HPA draws upon. Street artists find it harder to find places to paint when walls become assets, moving their painting practices elsewhere in the city, and even painting less frequently as a consequence of increasingly perceiving painting as employment, as opposed to a cultural practice. Bringing these arguments together, I posit that the assetisation of walls, and ultimately the built form, leaves aesthetic and cultural traces at the scale of the street, and explore what this means for places and artistic cultures in Australian cities where an HPA industry is growing.



Valorization processes: urban visual practices in contemporary Italian cities

Cecilia Brazioli¹

¹University of Milan

HDR 2A, P413, December 8, 2025, 09:00 - 10:30

Originated as external, if not in contrast, to the field of urban planning, spontaneous expressive practices, such as graffiti writing, are now central in the discourses of urban planners and their *modus operandi* (Vivant, 2020). Cultural governmentality, “endogenizing” spaces of critique (Boltanski and Chiapello, 1999), seems to compel actors with a critical view of urban planning to adapt. Some authors highlight the relevance of the visual and the aesthetics (Bohme, 2010, 2017; Murphy and de la Fuente, 2014), or, more generally, the sensory aspects of our experience as users of a specific space (Carmo et al., 2014), for value extraction, stressing the neoliberal nature of current Western cities’ management of urban order.

Nonetheless, graffiti writing can offer a singular experience outside of the predetermined, routine frameworks of this increasingly standardized and domesticated city (Chatterton, 2002), rhyming with an aesthetic of “infestation” and jeopardizing the legitimate aesthetic order. Thus, at the same time as various official projects exploit street artists for urban regeneration purposes, graffiti writers are still prosecuted for their actions on walls, on trains, in the streets, giving life to what has been referred to as a divergent synthesis (Brighenti, 2016) of space valorization and a proliferation of valorization processes.

Measures, as never neutral, uncover both epistemic models and power tools (Brighenti, 2016b). Valorization processes, as inherently unstable and multifaceted, condense scattered discursive repertoires and representations. Through qualitative interviews, coupled with documentary analysis, I rely on the discourses, narratives and negotiations that represent the underlying linguistic systems of measure of the complex dynamics of valorization to grasp different understandings of the (il)legitimate aesthetic order of the cities. I focus on the Italian cities of Milan, Turin and Bologna and on those social categories most involved in urban aesthetic production: public authorities, urban artists, and graffiti writers.



Situating Gurdwaras for the Sikh diaspora in Australia

Asees Prab¹¹RMIT University

HDR 2A, P413, December 8, 2025, 09:00 - 10:30

As transnational migration reshapes urban landscapes, religious architecture has become a critical medium for expressing diasporic identities. This research investigates the development of architecture of Sikh temples, i.e. gurdwaras, as religious, social, cultural and political institutions within the Sikh diaspora in Australia. Gurdwaras are not only centres of religious practices but multifunctional spaces that support cultural preservation, community cohesion, and social outreach. The research also highlights adaptive reuse practices—such as the transformation of churches and farmhouses into gurdwaras—as emblematic of a hybrid sacred architecture that merges theological function with community pragmatism.

Drawing upon the theoretical framework on Sikh architecture and employing methods of observation and photography of gurdwaras in Melbourne, the study explores how these complexes in Australia balance traditional design principles with multicultural sensitivities. Through case studies, the analysis emphasizes how spatial, functional and symbolic elements reinforce core Sikh tenets, while also addressing regulatory and aesthetic tensions, leading to certain architectural choices and spatial representations. Ultimately, the study frames the gurdwaras not merely as architectural objects, but as dynamic and evolving sites of identity-making, negotiation and cultural resilience for Australia's Sikh diaspora—which has tripled in population since the 2011 census—situating the spatial politics of belonging in an increasingly pluralistic society.

This research project is third in the series of work produced on Sikh architecture in Australia by Asees. It builds upon earlier work from a funded book project (co-authored by Asees). The research theme originated during the first-ever international symposium on Sikh architecture, in 2021 in Chandigarh, India, serving as a significant milestone in initiating scholarly discourse on the subject. This research is part of a notably original project, as it is the first of its kind to examine the architectural and the socio-cultural importance of Sikh gurdwaras within the Australian context.



Designing for whom?: Diverging expert and community visions of security in the urban public realm

Codee Ludbey¹

¹University of Technology Sydney

HDR 2B, P413a, December 8, 2025, 09:00 - 10:30

As Australian cities grapple with densification, liveability, and resilience, security has emerged as a silent yet powerful design driver in the evolution of public space. Drawing on original concept mapping with expert practitioners and a community survey, this paper explores the divergent ways security is conceived, prioritised, and spatialised within contemporary urban design processes.

Urban practitioners and security professionals alike claim to foster 'safe and secure' places, yet their conceptual frameworks diverge sharply. Where urban design-oriented practice tends to privilege openness, informality, and passive social cues, security practice leans toward control, surveillance, and physical intervention. This epistemic gap is not merely disciplinary—it materialises spatially in how environments are shaped, policed, and experienced. Community perceptions further complicate this terrain, revealing tensions between protective intent and lived experience.

By comparing expert mental models and public sentiment across a practitioner-developed set of security and design interventions, this paper surfaces critical misalignments that challenge dominant urban design narratives. Specifically, it reveals that certain interventions—such as advanced CCTV systems and operational security management—are routinely endorsed by professionals, but signal exclusion, over-policing, or discomfort to communities. Conversely, interventions like signage, regulatory cues, maintenance practices, and community engagement are interpreted inconsistently across stakeholder groups, suggesting a fragile consensus on what constitutes “safe” design.

Rather than arguing for or against securitised design, this paper uses the lens of security to interrogate how risk logics, professional worldviews, and community sensibilities co-produce the urban realm. The findings contribute to emerging critiques of security-oriented practices—often justified through resilience or risk—which can inadvertently undermine inclusivity, spontaneity, and the democratic use of public space. In doing so, the paper calls for a recalibration of design values: one that centres lived experience and recognises security as a negotiated, situated, and culturally embedded quality of urban life.



Riverside urbanity: river edge typomorphologies and social encounters

Ruoxin Liu¹¹The University of Melbourne

HDR 2B, P413a, December 8, 2025, 09:00 - 10:30

Riverside renewal has become a growing global phenomenon since the 1970s, initially emerging in North America and Europe and now spreading to other regions around the globe. Riversides can act as either connective borders or divisive boundaries (Sennett 2006) within the urban fabric, influenced by social and physical accessibility. While previous studies have examined spatial types of river edges or public access separately, these remain mostly limited to the macro-scale and the Global North. How these spatial conditions relate to the everyday use of riversides remains unclear. Therefore, this research aims to identify the distinct river edge morphological types and explore how they enable or constrain social encounters. A typomorphological analysis of riversides was applied within urban centres across 54 cities in Australasia, Europe, Americas, Asia and Africa, to identify street pattern types where urban social interaction is more likely to emerge. Three cities representing distinct types were then selected for comparative case studies. Mapping urban form alongside observations of riverside behaviours supports the investigation of which morphological factors influence encounters of social difference. Data are obtained from both online open platforms and on-site field research.

Findings show five types of riverside morphologies, ranging from highly permeable to spatially segregated urban fabrics. Some of the most segregated conditions are linked to riverside privatisation, or large grain development. While retail-oriented waterfronts can attract people to linger, they are also a form of privatisation—catering primarily to those who can afford to consume, and thereby limiting the diversity of users. More results and discussion would arise from further mapping and analysis. This research could inform spatial planning strategies by advancing the understanding of how restrictive riverside barriers may be transformed into inclusive and vibrant public spaces. These findings are particularly relevant for Australasian cities, where large riverside areas are currently undergoing redevelopment.



The urban legacy of Olympic villages

Kevin Cherian¹

¹The University of New South Wales

HDR 2B, P413a, December 8, 2025, 09:00 - 10:30

Mega-events like the Olympic Games act as powerful urban catalysts, fuelling large-scale transformations and growth within host cities. This research investigates the morphological evolution of Olympic villages and their surrounding impact zones, comparing three legacies of Villages in Sydney, Munich and London.

Using morphological methods, including historical spatial pattern analysis, street network studies, and typological assessments, this research traces the tangible changes from pre-Olympic conditions to the present. The Olympic Villages are the focal attention of this research as they become integral components of their cities urban life and systems. However, they are often overshadowed by the more prominent legacies of Olympic sporting infrastructure. Furthermore, their transition to private properties post-events results in limited post-event controls of transformation, making it less flexible for future adaptations or improvements. This can limit the long-term value and impact of these sites. This research theorises that future Olympic villages can learn and improve from these earlier models, providing a critical foundation for more adaptive and sustainable designs.

The research adopts a comparative framework highlighting historical transformations, spatial networks, and functional shifts, shedding light on how the Olympics and their villages have shaped and been shaped by their urban contexts over time. Therefore, the outcomes of this research offer valuable perspectives not only for the forthcoming Brisbane 2032 Olympics but also for broader global paradigms in sustainable urban forms and urban planning.



Embedding circularity in urban form: A framework for mid-rise precincts in southeast Queensland

Ms Sevgim Pekdemir¹

¹Queensland University of Technology

HDR 2B, P413a, December 8, 2025, 09:00 - 10:30

Circular Urban Design (CUD) offers a theoretically grounded framework for addressing the spatial, social, material, and ecological failures of linear urban development. It enables designers to reconceptualise precincts as regenerative systems that embed reuse, adaptability, and integrated lifecycle thinking. In Southeast Queensland (SEQ), where densification pressures are producing a fragmented urban landscape shaped by suburban sprawl and high-rise intensification, mid-rise precincts (MRPs) present a critical spatial opportunity for applying CUD principles.

Mid-rise typologies emerging from SEQ's densification policies are often speculative, market-driven, and poorly integrated with their urban context. This disconnect limits the capacity of urban design to deliver typologies that are resilient, inclusive, and spatially coherent. Reframing MRPs as dynamic, place-responsive systems shaped by CUD offers a way to align building form with broader precinct-scale relationships of context and performance in response to these fragmented conditions.

This research tests and refines the CUD framework through the iterative design of MRPs in SEQ. Adopting a design-based methodology, it draws on case study analysis and applies the CUD framework in a series of expert-participated design charrettes currently underway in Australia, Italy, Poland, and Türkiye. These charrettes are structured around three phases—concept design, street layout, and building typology—through which the morphological, spatial, and performative dimensions of circularity are being developed, prototyped, and critically evaluated.

The project will produce a spatial catalogue of mid-rise typologies tailored to the SEQ context, along with a tested CUD framework at the precinct scale. Preliminary findings highlight the need for design approaches that bridge regulatory aspirations with morphological specificity and social inclusion. This study contributes to rethinking urban form as a vehicle for systemic change, positioning MRPs as experimental platforms where designers mediate between material cycles, spatial flexibility, and urban legibility.



Bridging the gap: aligning spatial and railway development plans in New Zealand

Behnaz Shaabani¹, Dr Elham Bahmanteymouri¹, Dr Mohsen Mohammadzadeh¹

¹University of Auckland

HDR 2C, P504, December 8, 2025, 09:00 - 10:30

The integration of spatial and railway development is essential to have a sustainable and efficient transport system. Implementing integrated spatial and railway development in New Zealand faces barriers, partly due to the misalignment of plans, programs, and policies across different governmental levels, including national, regional, and local levels, as well as in different spatial planning and transportation planning sectors. This paper aims to determine the extent of this misalignment by investigating key government documents categorised as secondary data. This research will focus on identifying overlaps, gaps, and inconsistencies in the planning processes, leading to fragmented decision-making within spatial planning and transportation planning sectors with an emphasis on the railway development programs in New Zealand.

The methodology involves a comprehensive review of governmental documents, including national, regional and local governments' development strategies, plans and policies. This study identifies where the national strategies diverge from regional plans and local policies by systematically analysing and comparing the content of these documents. By mapping out where these plans conflict, this article identifies the critical gaps that act as barriers to integrated spatial and railway development that contribute to the institutional and governance challenges in New Zealand. The findings of this research have significant implications for policymakers and stakeholders in both spatial planning and transportation planning sectors. Addressing the misalignments is an essential step to secure coherence and integrated planning processes within different development sectors and across different governance levels. As New Zealand initiated an ambitious long-term rail plan, this research provides timely insights into how coherent governance frameworks can be reformed to support a more integrated approach to railway development and ensure its alignment with spatial planning goals.



Integrating smart technologies and urban resilience in Australian cities: A governance-focused framework

Ms Shabnam Varzeshi¹

¹RMIT University

HDR 2C, P504, December 8, 2025, 09:00 - 10:30

This study examines the strategic integration of smart city technologies into urban resilience planning to tackle the complex challenges posed by 21st-century urbanisation, climate change, and socio-technical transformation. Concentrating on Australian cities, the research looks at the interactions between digital innovation, multi-level governance, and community engagement, aiming to foster resilient, inclusive, and adaptive urban futures.

The research employs a qualitative, multi-phase methodology. It starts with a systematic review of literature and interviews with experts to create a conceptual framework. This is followed by thorough policy analysis and comparative case studies in Tier 1 cities (Sydney, Melbourne, Brisbane) and Tier 2 cities (Geelong, Newcastle, Adelaide, Hobart, and the Sunshine Coast). Sydney is the focal case study, providing practical insights into the implementation of smart technologies through projects like the NSW Digital Twin, Land iQ, and Simpact. Data were gathered through document analysis and semi-structured interviews with key stakeholders, which were then analysed thematically.

Research shows that smart technologies can greatly improve urban resilience by offering real-time monitoring, predictive analytics, and better service delivery. However, their success is largely shaped by governance frameworks, funding sources, and consistent policies. Different urban tiers exhibit distinct abilities and obstacles, especially in community involvement and sustainable planning.

The study concludes with the creation of the Smart Urban Resilience Framework (SURF), a flexible, policy-focused framework that combines data-driven decision-making, inclusive governance, and scalable technology strategies designed for various urban contexts.

This study aims to bridge the theoretical and practical divides in urban planning and resilience discussions. It provides actionable insights for policymakers, planners, and researchers focused on harmonising smart city innovations with equitable and sustainable urban development.



Urban planning non-statutory policy construction: Envisaging a refined interpretive approach

Willem Van Wyk¹

¹University of New South Wales

HDR 2C, P504, December 8, 2025, 09:00 - 10:30

This research project explores how non-statutory planning policies should be interpreted. Proper interpretation is necessary for ensuring policies are applied correctly and consistently to land use planning decisions. In particular, the research is concerned with whether established principles of statutory interpretation should be used for interpreting non-statutory policies or whether something else would be more appropriate. If they should be used, how can planners be better informed of their existence? If they should not, what principles should be applied in their place? The rule of law requires the law to be known. It follows that this must include how the law will likely be interpreted, otherwise it remains elusive.

The rule of law applies to policies too, which function as “soft law”. Policies have a public function in that they are used to make decisions which impact the physical environment and, by implication, lives. These documents have a distinctive context given they are often drafted by planners without the benefit of the Office of Parliamentary Counsel. The research is from a planning perspective, as these are planning policies being interpreted within a legal setting. There are distinctions between the nature of planning and legal epistemology which come to the surface in interpretation.

The research contributes to wider understandings of how the dynamics of the separation of powers influence urban governance frameworks. The tensions are ultimately a function of the uneasy marriage of the fields of planning and law, and of the executive and judicial arms of government.

The research is underpinned by legal analysis, in-depth interviews and an applied review of the principles, with a particular focus on New South Wales. As the project is in its second year, the presentation will focus on the conceptual framework with some preliminary findings from the primary research.



The new waterfront: Planning cultures, informal community engagement and the construction of public space

Ms Ngoc Thao Linh Dang¹

¹Monash University

HDR 2C, P504, December 8, 2025, 09:00 - 10:30

Extensive research has examined the physical and economic aspects of waterfront redevelopment. Yet, there has been limited exploration of its cultural and governance dimensions, particularly in the context of the Global South. This research develops a conceptual framework based on a literature review focused on waterfront regeneration, planning cultures, public participation, and theories about the right to the city and postcolonial urbanism. By concentrating on Vietnam, this study employs a case study approach to analyze the planning process of waterfront regeneration in Danang, posing the research question: How can the planning process influence the outcomes of public space planning?

The research employs semi-structured interviews, document analysis, and field observation to uncover how residents, planners, and local authorities interact within and beyond official planning processes. This research contributes to the broader debate on governance and informality in a non-Western context, reframing informal community engagement not as mere disorder or resistance but as practices of "commoning" where communities collectively reclaim their right to access, shape, and manage urban space. The findings demonstrate how grassroots initiatives actively reshape planning outcomes, challenge Western-centric assumptions in participatory planning, and enrich the concept of the commons with empirical evidence from Vietnam. It emphasizes the need for planning authorities to recognize that planning policies, the judgments of planners, and decision-making processes are critical elements that shape the extent and channels of community engagement. By incorporating cultural perspectives, authorities can develop more inclusive engagement strategies, allowing communities to actively and genuinely participate in developing waterfront public spaces.



The redevelopment of former golf courses: Examining stakeholder collaboration and conflict resolution.

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The redevelopment of former golf courses presents growing challenges for urban planners through the balancing pressures of housing, community interest and environmental conservation. This study explores the redevelopment potential of golf courses through a cross-theme analysis that considers housing, environment, governance and community inclusion while identifying key drivers behind closures and repurposing. It also evaluates the planning strategies that support more sustainable, community-aligned outcomes. A qualitative data analysis shall examine local Arundel Hills and Parkwood Village (Gold Coast) cases supported by well-established international case studies to uncover common factors contributing to success or failure.

Primary data shall be collected through local stakeholder interviews and surveys involving developers, planners, the local community and environmental groups. Based on preliminary review and early scoping, the research expects to find that early engagement, transparent communication, and balanced decision-making are critical to reducing redevelopment conflicts, particularly where trust has historically been low. Anticipated findings also suggest that uneven power dynamics- especially between private developers and local communities- may significantly influence the redevelopment process and outcome.

A conceptual planning framework adopted from Campbell's (2016) Planner's Triangle will guide the redevelopment tensions and trade-offs analysis. The framework will shape practical strategies to support stakeholder collaboration and more equitable land reuse. Findings are expected to inform future decision-making by offering planners and policymakers a practical foundation for more inclusive and resilient land repurposing. By examining how planning decisions are made, contested and negotiated among stakeholders, the research contributes to broader discussions on urban governance and the capacity of planning systems to manage land-use conflict in rapidly evolving city contexts.

Keywords: Golf Course Redevelopment, Stakeholder conflict resolution, Sustainable urban planning, land-use transformation, community engagement.



Planning for health and wellbeing in high-rise precincts: Understanding the influence of precinct urban geometry

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Globally, urbanisation within a sustainable compact city policy context is reshaping our cities. Urban planners and developers are increasingly turning skyward to house growing populations where land supply is constrained, land values are high, or capital is responding to market demand. As the pace of high-rise (HR) development has accelerated in Australia over the last decade we have experienced 'growing up' pains with poor outcomes and high levels of dissatisfaction reported in some places.

Health and wellbeing concerns persist for specific population groups such as families and older people living in HR environments. The negative health impacts of poor indoor environmental quality are potentially magnified in apartments where residents have less control, a stressor itself, or are spending longer periods of time at home. The need for adaptive behaviours, such as a reliance on mechanical cooling or heating to achieve thermal comfort, call into question the sustainable liveability of this form. Despite scholarly interest in healthy HR building design, what remains less evident are the key spatial determinants of health in emerging HR precincts beyond the apartment and individual building scale. The research considers urban form at the precinct scale and the lived experience of residents in open HR precinct typologies, equated with the 'tower in the park' model, and more compact and dense typologies in Brisbane, Australia.

A mixed-methods approach combining spatial analysis, microclimate monitoring, and in-depth resident interviews framed within person-environment fit theory was employed. The research focus is the role of 'breathing space', that is intercellular space between buildings created by density and separation policies, and the affordances this space offers for daylight, breeze, visual privacy, and outlook. Breathing space is conceptualised as potentially life supporting space between buildings within the urban tissue with direct implications for residents' thermal and visual comfort, and ultimately their health.



Rethinking station precinct as a place for healthy ageing in Australasian TOD futures

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As Australian cities pursue transit-oriented development (TOD) to address sustainability and population growth challenges, the health and liveability needs of ageing populations remain largely marginalised within urban design and planning practices. This paper draws on open-ended, semi-structured interviews with planners, urban designers, architects, transport planners, policymakers, and ageing-focused advocates across Australia, New Zealand, the United States, Canada, and Japan to critically examines how older adults' social and spatial needs are (or are not) considered in TOD frameworks. While recent planning reforms increasingly integrate seniors' housing into station precincts, the broader public realm surrounding railway hubs remains underdeveloped, overlooking its significant potential as critical social infrastructure for healthy ageing. The findings reveal that infrastructure-led approaches continue to dominate, prioritising housing supply and economic returns over long-term social outcomes. Older adults are frequently positioned through reductive narratives of physical decline, rather than as active urban agents with diverse routines and aspirations. This paper argues for rethinking station precincts not merely as transport nodes but as inclusive social infrastructure. The study proposes embedding a value-focused planning approach that centres lived experience and prioritises values such as safety, connectivity, and engagement. This includes early involvement of designers, cross-sectoral collaboration, and iterative, context-sensitive engagement with older communities. Rethinking TODs through the lens of healthy ageing offers a pathway to creating socially sustainable station precincts that support ageing in place, which is not just for older people, but for more inclusive urban futures across generations.



Multilevel longitudinal analysis of physical functioning change by sociodemographics and neighbourhood disadvantage among mid-to-older adults

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Background: By 2050, an estimated 22% of the global population will be aged over 60 years, mostly living in urban areas. In this context, physical functioning, an individual's ability to undertake daily activities, is critical to enabling healthy ageing and independent living in later life. Many empirical studies have found that individuals with lower socioeconomic positions and residents of the most disadvantaged areas reported poorer health outcomes. However, limited longitudinal research has explored the influence of individual and neighbourhood level disadvantages on changes in physical functioning in later life. This study aims to examine the associations between sociodemographic characteristics and neighbourhood disadvantages and changes in physical functioning over three years in mid- to older-aged adults. **Methods:** Data were collected from 3288 participants, aged 45-74 years, living across 200 neighbourhoods of Brisbane, Australia, using Wave 4 (2013) and Wave 5 (2016) of the How Areas in Brisbane Influence health and activity (HABITAT) study. Multilevel linear regression analyses were conducted, incorporating interaction terms between individual and neighbourhood disadvantage to examine whether the effects of different sociodemographic characteristics on changes in physical functioning varied across neighbourhood disadvantage quintiles. **Results:** After adjusting for baseline physical functioning scores and sociodemographics, residing in more disadvantaged neighbourhoods was associated with greater decline in physical functioning. The associations between individual-level markers of disadvantage and greater decline in change in physical functioning were moderated by neighbourhood disadvantage, demonstrating the impact of double disadvantage. Those aged over 70 years, in casual work or renting privately, also reported greater decline in physical functioning irrespective of neighbourhood disadvantage. **Conclusion:** This study identified the social gradient in physical functioning among mid-to-older adults. The findings underscore the importance of concurrently examining individual and area-level disadvantages to better understand how their interaction contributes to double disadvantage, accelerating physical functioning decline among older adults.



Prioritising child-friendly design solutions with explainable AI

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Promoting a healthy and active lifestyle should be prioritised from childhood, with initiatives such as walking or cycling to school serving as key starting points. However, rapid urbanisation and the growing reliance on automobiles have had a profound negative impact on urban landscapes, diminishing the quality of residential areas, particularly in terms of child-friendliness and inclusivity for younger age groups. The absence of pedestrian infrastructure separated cycle tracks, and perceived or actual route safety limits children's ability to engage in active travel to school, even over short distances. To address these deficiencies, this study raises three critical questions. First, what is the relationship between specific urban qualities and the perceived child-friendliness of neighbourhoods? Second, which urban features most significantly influence child-friendly environments? Third, how are these qualities spatially distributed across the urban fabric, from central neighbourhoods to peripheral areas?

Building on these research questions, this paper proposes an innovative integration of deep learning and crowdsourcing methods to assess parental perceptions of safe, comfortable, and pleasant school neighbourhoods. As a case study, approximately 5,000 images were generated and assessed from school routes surrounding six schools in Brisbane City. The study employed an advanced image-based analysis using Street View Imagery (SVI), combined with Explainable Artificial Intelligence (XAI), to identify key urban design elements that contribute to environmentally child-friendly features. In parallel, a crowdsourced Elo rating algorithm was used to systematically prioritise visual urban attributes by ranking subjective perceptions of the built environment.

This approach highlights areas in need of improvement and identifies the design elements that most effectively support child-friendliness. Moreover, the results reveal which built environment elements require enhancement to support inclusive, independent travel and promote healthy childhood development.



Classifying barriers to integrating affordable housing and Transit-Oriented Development (TOD): A Systematic Literature Review

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One of the main promises of Transit-Oriented Development (TOD) is the provision of affordable housing near transit stations. TOD represents a strategic approach that can deliver much-needed affordable housing while creating inclusive and sustainable communities near transit hubs. However, in several Australasian and global cases, the implementation of affordable housing within TOD projects remains limited due to various barriers. While some studies have explored practical constraints such as financing constraints, regulatory challenges, and community opposition, deeper fundamental dynamics, including the financialisation of homeownership, also contribute to this issue. Despite these discussions, there are limited studies that offer a comprehensive classification of the barriers hindering the integration of TOD and affordable housing. This research addresses this gap by conducting a systematic literature review in accordance with the PRISMA guidelines to identify and then categorise barriers, with a focus on classifying them into practical and fundamental constraints. The findings will provide a comprehensive understanding of the barriers impeding the implementation of affordable housing in TOD projects and offer insights for policymakers and urban planners seeking to enhance housing affordability within Transit-Oriented Developments.

Keywords: Transit-Oriented Development (TOD), affordable housing, systematic literature review, practical and fundamental constraints



Climate Interior Design: Transitions for flood impacted homes

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The Brisbane creek and riverside suburb of Oxley was among the areas significantly impacted during the 2022 floods, which saw over 23,000 homes inundated across the city and resulted in more than 303,000 insurance claims totalling \$7.4 billion nationwide. This research explores the application of transition design to residential interior design through the flood-prone suburb of Oxley as a case study. Transition Design is a sustainability-focused, systems-oriented methodology that engages communities in iterative, long-term design processes. It also provides a framework for addressing complex, systemic problems by working iteratively across multiple scales through speculative projects.

The study represents the first of three climate interior design projects focused on testing transition design's potential for adapting residential interior design practices to respond to the climate crisis. The project explores how interior designers might support climate adaptation not just through material or technical upgrades, but by engaging with the lived experiences and social contexts of affected households. Through semi-structured interviews with members of the Oxley community, the study gathers data on domestic life, community connection, and responses to climate risk. Participants reflected on their experiences of flooding, adaptation strategies, and perceptions of local vulnerabilities and strengths.

These findings inform speculative interior design interventions generated through the transition design process. By spotlighting local narratives and lived experience, it offers new perspectives on how residential interior design can move beyond technical retrofits toward socially embedded, regenerative approaches. The applications of this research include new tools for designers to design context-specific adaptation strategies with communities, insights for local councils and policymakers on how to support household-level preparedness, and guidance for homeowners navigating flood risk and interior design decisions. By exploring the process of climate adaptation in interior design, this study aims to contribute to the creation of more resilient, inclusive, and sustainable urban futures.



Measuring the well-being of households living in social housing in Australia

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In emerging literature, housing has moved away from an affluent commodity and financial asset towards a fundamental component of individuals' well-being. The sense of belonging, the feeling that makes a place called 'home', the comforting feeling through residing, are just a few instances that support the idea that housing is not restricted to merely a roof over households living there. Social housing as a form of housing, provided as a form of housing assistance, roots in the early 20th century and to this very day continuously plays a significant role in assisting the most vulnerable cohorts of Australian society as well. That said, social housing has translated into homes for its households, and it is sensibly expected to have roughly similar impacts on households' well-being as private housing. This provides the context for exploring the well-being of social housing households. Through detailed enquiry of various approaches utilized in measuring the well-being of individuals, this research suggests the Capability Approach introduced by Amartya Sen to measure the well-being of households living in social housing. In this approach, well-being is defined through capabilities and functionings for having a fulfilling life, given the emphasis on the significance of having the freedom to choose how to live. The main core of this approach maintains the significance of specific characteristic features and avoids providing a fixed equivalent list of functionings. Therefore, an initial step for achieving the aim of this research is identifying social housing well-being functionings and capabilities, which is a significant point of distinction and debate among experts. In this respect and through considering the relevant literature, this research, as the first step of utilizing the Capability Approach in measuring the well-being of households, suggests identifying functionings and capabilities of households living in social housing in Australia through public deliberation and democracy processes.



Circular Economy volume homebuilding; prospects for transition

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The ongoing expansion of housebuilding is expected to significantly increase material consumption in the coming years, exacerbating the climate emergency. Embracing Circular Economy (CE) principles offers the potential to address this urgency. However, the volume homebuilding sector, while both a dominant provider of housing and the primary driver of affordable housing supply in Australia, is not well understood in terms of its transition to CE. Yet, housing produced this way remains a major contributor to material consumption and greenhouse gas (GHG) emissions. The uptake of CE in this sector is limited due to a range of practical hurdles, including institutional routines, industry norms, material expectations, etc. Notably, reuse is considered one of the most effective strategies for waste prevention and efficient resource use in CE discourse, but it is typically more complex to implement than virgin materials. Current sustainability practices in housebuilding focus predominantly on landfill diversion, recycling, and waste sorting, with minimal attention to substitution. Additionally, the digital procurement platforms, now central to material sourcing, tend to privilege linear supply chains and rarely account for alternative, reuse-based economies. This PhD explores the challenges and opportunities associated with embedding material circulation as a standard construction practice to support more circular and inclusive housing systems.

Using Actor-Network Theory, this study employs a qualitative method, including semi-structured interviews with built environment practitioners and sustainability experts, to examine reuse practices and the role of digital platforms in this regard. Initial findings revealed six key themes—CE Knowledge, Post-COVID Housing Market, Legal Frameworks, Industry Mindset, Digital Infrastructure, and Cost Barriers—that shape stakeholder perspectives and illuminate the socio-technical dynamics of reuse. This PhD contributes to the discourse on sustainable and inclusive housing by exploring how material reuse can reform housing delivery systems and support more resilient, affordable housing in response to ongoing social and environmental challenges.



Assessing policy impacts on long-term rental prices from short-term rental regulations: Airbnb in Sydney study

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This paper investigates the spatial and economic impacts of short-term rental (STR) regulation on housing affordability in Sydney. Using a Difference-in-Differences framework, we estimate the causal effect of New South Wales' Short-Term Rental Accommodation (STRA) laws, which introduced a 180-day cap on non-hosted Airbnb stays—on long-term rental prices. By comparing outcomes in Sydney, where the policy was implemented, to Melbourne, which served as a control, we find that the STRA laws were associated with a 2.73–3.55% increase in rents. Rather than encouraging a return of dwellings to the long-term market, the restriction appears to have led investors to raise nightly prices or continue acquiring and operating short-term rentals in an effort to recoup losses, thus worsening affordability pressures.

To trace both the timing and distribution of these effects, we apply fixed effects and an event study design to model rent changes at the Statistical Area Level 2 (SA2) across both the announcement and implementation of the policy. This methodological approach allows to capture variation across neighbourhoods with different socio-economic profiles with the strongest rent increases occurred in lower-income areas, emphasizing how uniform regulation in platform-dominated housing markets can produce regressive outcomes. In doing so, the study contributes directly to the SOAC 2025 theme of City Housing and Inclusion, demonstrating the need for policy frameworks that integrate local housing conditions with market dynamics, and the uneven risks of displacement.

This research draws on urban planning, housing economics and econometrics to examine the challenges of regulating short-term platforms in high-demand cities. While much of the literature focuses on Airbnb's entry and growth, fewer studies examine the impact of limiting policies, especially in Australia. Using causal methods, the study examines how such regulations influence rental prices and housing equity, offering insights for planners and policymakers aiming to promote inclusive and affordable housing systems.



Reframing urban green space access: A spatial-perceptual analysis in Liverpool, Sydney

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Urban green spaces play a critical role in promoting physical activity, mental well-being, and social cohesion. However, emerging evidence suggests that spatial proximity alone does not guarantee equitable or meaningful access, particularly in socio-culturally diverse urban contexts. This paper forms part of a broader doctoral investigation into green space accessibility in Liverpool, Sydney, and focuses specifically on the alignment between quantitative modelling and perceptual realities. It addresses two key research questions: (1) What is the gap between spatial and perceived park accessibility? (2) What factors contribute to these disparities? Spatial accessibility is quantified using the Enhanced Two-Step Floating Catchment Area (E2SFCA) method, which integrates service area, park capacity, and network-based distance-decay functions to reflect local mobility realities. Based on modelled outcomes, two parks with contrasting accessibility scores—Woodward Park (highest) and Dunbier Park (lowest)—were selected to enable comparative analysis across different neighbourhood contexts. An anonymous on-site survey was conducted at both parks, adapted from and informed by the NSW Government's Great Places Toolkit (NGGPT). The survey captures perceived access in terms of safety, comfort, inclusion, and emotional engagement. Data collection is currently underway, with planned integration of survey results and spatial scores to evaluate how well existing models reflect lived experiences.

This research contributes a multidimensional framework for understanding park accessibility and critically assesses the field application of NGGPT. Findings will inform more inclusive and community-centred planning approaches that move beyond proximity-based models of park provision.

Keywords: Liverpool, NSW; Urban green space; Park accessibility; Perceived access; Enhanced Two-Step Floating Catchment Area (E2SFCA); Community perception; Inclusive urban planning; Urban policy



Homegrown community resilience: Urban agriculture – supporting community connectedness and reducing vulnerabilities

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Today we face huge challenges that require complex, integrated solutions. Our urban centres are full of people; however, a lack of connection may be inhibiting coordinated approaches that enhance resilience at the community-scale (which typically shares geographic boundaries and fate). As a nature-based solution encompassing adaptation and transformation abilities, household urban agriculture – growing food at home – provides opportunity for building collective resilience, an important facet of (broader) resilient and sustainable communities. Using this farming system as a mechanism and investigative lens, this research considers community resilience with its notions of being resilient together, not just in similar ways, to mobilise community members to survive and thrive in amongst change and uncertainty presented by some of the world's most wicked challenges including global food security, urbanisation, and climate change.

Within this exploration, 483 voices have been heard across the Greater Adelaide (metropolitan) community via an online survey, in addition to those of diverse communities of practice (CoPs) who engaged in a process of community corroboration of initial results via focus groups to help ensure the research accurately represents the community's perspectives. The results suggest that this community recognises a correlation between growing food at home and reducing community vulnerability and susceptibility to the impacts of climate change, particularly through connectedness. This is apparent despite the occurrence of these practices being undertaken in private locales (typically in fenced off backyards in this low-density city), with knowledge-, resource- and harvest-sharing all contributing to the accessibility of community connectivity and associated benefits of household urban agriculture. In addition to sharing the captured perspectives and practices, this research also shines a light on local solutions that are enabling urban communities to address global challenges through homegrown endeavours.



Wildly productive landscapes for health, wellbeing and food system resilience

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Interstitial and informal green spaces, including street verges, vacant lots and underused spaces within parks, often lack recognition in land-use planning frameworks. Comprising substantial areas of land, these existing resources offer significant contributions to cities' green infrastructural network to deliver an array of ecosystem services. While informal green spaces can be overlaid with different and multiple functions, this PhD project focuses on urban food-growing practices. In the contexts of sustainable urban development and public health, such practices offer a physical platform for addressing critical preventive health and wellbeing issues by augmenting existing food environments with nutritionally dense foods while reinforcing the interconnectedness between human and more-than-human forms of life.

In this thesis, I develop the notion of agroecological rewilding—the integration of productive food plants into everyday urban landscapes to catalyse greater exposure to and meaningful engagement with ecological processes—as a lens for understanding food-growing practices in interstitial and informal urban green spaces and explore the capacity for urban networks of 'wildly productive landscapes' to build food system resilience. Taking a 'research through design' approach, I aim to create a context-specific urban model for the subtropical city of Brisbane, Australia by identifying potential site location typologies and developing urban design strategies and policy recommendations that involve urban planners, municipal authorities and local community members alike. The methodology also includes a series of field projects as a prototyping process for gathering practical insights and data to inform the research. By acknowledging the interrelation between food production and the natural environment, this research addresses a crucial lack of sociocultural and political awareness of food production in urban contexts and, consequently, the absence of urban planning strategies that directly address the acquisition of ecological knowledges.

Keywords: Agroecological rewilding, productive landscapes, green infrastructure, food system resilience



Visioning street green canyons: Classifying and mapping typologies via deep learning and street-view images

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The urban street green canyon refers to the spatial form created by the enclosure of street greenery, playing a crucial role in enhancing the ecological quality of urban environments and offering significant microclimatic and social benefits. While urban canyons have been extensively studied, research has predominantly focused on building-defined spaces, often overlooking the influence of street-side greenery. With the widespread application of Deep Learning in urban studies, an increasing number of street-level greenness indicators have been developed to quantitatively assess urban street greenery perception, e.g., the Green View Index (GVI) and the Panorama View Green View Index (PVGVI). However, most of these indicators focus on quantifying green volume, with limited emphasis placed on the classification and evaluation of urban green canyons. Moreover, an effective and accurate assessment of street green canyons is a fundamental prerequisite for research on urban greenery morphology, as traditional approaches, which largely rely on extensive field surveys, are costly and laborious. To address these limitations, this study develops a novel approach for classifying urban green canyons using Google Street View (GSV) imagery. Leveraging recent advances in Deep Learning, we adopt the Vision Transformer (ViT) model to classify green canyons at four levels: greenery-location-based, greenery-type-based, greenery-height-to-road-width(H/W)-based, and greenery-symmetry-based. The model was trained, optimised and validated using approximately 225,500 street segments across major urban areas in Sydney. Results indicate that the proposed model achieves a relatively high level of accuracy across all four classification tasks. Finally, thematic maps of the multi-level classification results were generated and spatially analysed. This classification framework not only offers a cost-effective tool for the classification and mapping of urban green canyons but also provides valuable street-level data to better facilitate further research on urban green morphology and urban microclimate.



Qualities of inclusive urban green spaces: Exploring migrant and non-migrant perspectives from Wellington, New Zealand

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Visiting urban green spaces (UGS) is beneficial, particularly for migrants, as it can foster their sense of place and belonging and promote their physical, social and mental health. In addition, visiting UGS offers migrants the chance to spend time with family and friends and become familiar with the local culture and nature. However, individuals, including migrants, face barriers to visiting UGS not only because of the uneven distribution of these spaces in urban areas, but also because of qualitative attributes often not aligning with their needs and preferences.

To address this, the research approaches UGS through the lens of inclusive cities. While research shows that the qualities people seek in UGS can be more important than the features of the space itself, little is known about which qualities make UGS inclusive, especially for migrants. Therefore, the central question is: "What are the qualities of UGS where individuals, including migrants and non-migrants, feel included?"

I am collecting lived experiences from Wellington residents using a geospatial mixed-method online survey. It includes the qualities of UGS that individuals value to feel welcome, identification of which Wellington UGS are considered (un)welcoming by participants and why, and participants' socio-demographic backgrounds. Using statistical analysis, structural equation modelling, multiple indicators-multiple causes, thematic analysis and hotspot analysis, I identify spatial and statistical patterns of UGS qualities, how the qualities are interrelated, and key differences between migrants and non-migrants in which qualities make UGS inclusive. I will use qualitative data to expand on this in the next phase of my PhD.

The research provides policymakers and practitioners with the key qualities that support inclusive UGS provision, potentially addressing the barriers of visiting UGS and ensuring UGS benefits for all, particularly for migrants. Furthermore, it provides a map of Wellington UGS to inform policymakers about the suburbs lacking inclusive UGS.



What Drives Coastal Adaptation Policy?

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HDR 2G, P419, December 8, 2025, 09:00 - 10:30

Coastal cities around the world are experiencing increased environmental challenges due to sea level rise (SLR), which intensifies flooding, coastal erosion, and saltwater intrusion, posing risks to infrastructure, ecosystems, and communities. Although the risks are globally recognised, adaptation responses vary considerably between countries. Some have developed more established policies and actions, while others are still in the early stage. This PhD research aims to understand why such differences exist and what factors influence adaptation policymaking and planning indifferent governance contexts.

The research adopts a mixed-methods comparative case study approach that integrates four main components. The first stage involves a Systematic Quantitative Literature Review (SQLR) to identify global patterns in barriers, enablers, and drivers influencing adaptation. The second is a comparative policy review examining national, state/provincial, and local adaptation policies and plans in Australia and South Korea. Two countries with similar coastal exposure but contrasting governance systems. The third stage involves semi-structured interviews in both countries. The final stage synthesises insights across all components to develop a framework explaining how governance influence the development and implementation of adaptation policy.

The research is currently at the middle stage of candidature. By comparing decentralised and centralised governance systems, the study aims to contribute to a better understanding of how different institutional and political settings shape adaptation policymaking and planning. The findings will provide evidence-based insights to improve the effectiveness and equity of coastal adaptation policies and strengthen resilience to sea level rise in coastal cities worldwide.



Integrating urban and climate futures: improving urban growth modelling to plan for future climate uncertainty

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In response to housing affordability problems, many governments are turning to deregulatory approaches to boost housing supply, yet this also brings challenges for dealing with dynamic or uncertain risks. Urban planners are facing tough decisions amid the uncertainty surrounding our future climate and the changing nature of climate-related hazards. Projections of future hazards under alternative climate scenarios are available, but pairing those with current urban form fails to consider how future urban growth will change exposure, whether by new development, intensification, infrastructure investment, or greenspace strategies. In this research we explore how long-term changes in urban morphologies might be envisioned under alternative future climate and hazard scenarios, particularly if different paths for adaptation and mitigation are followed. We outline how urban growth modelling (UGM) can generate long-term climate-related urban growth scenarios if a specific set of methodological choices are selected. Application of an existing model to a study area in Aotearoa-NZ illustrates how UGM produces urban projections consistent with a plurality of economic, climate, and policy scenarios. However, the technical promise of UGM does not necessarily indicate its utility for urban planning. Results from our survey and interviews with NZ practitioners reveal that a lack of funding, data, skilled resources, and confidence in model functionality are significant barriers to uptake of UGM within local government. We conclude that stronger direction from central government is required to create a robust methodology for integrating urban futures with climate futures. Decision makers need fit-for-purpose tools and a mandate for longer-term risk-based spatial planning that balances development needs with sustainability and resilience to a changing climate.



Against the Wall: New-build gentrification and kampung resistance in the suburb of Jakarta, Indonesia

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New town development in Indonesia is currently designed to gentrify social spaces to lure the upper middle-class population. This trend, coupled with the government's laissez faire policy in the property market, has led to skyrocketing land prices and uneven development in Indonesia, especially in urban areas. In the context of urban Indonesia, new-build gentrifications manifested in new town developments have been supported by large-scale capital investments and regulatory support from the Indonesian government. In this research, my aim is to provide a comprehensive understanding of new-build gentrification and examine the socio-spatial consequences of the process on kampung, the irregular pre-existing settlements in Pagedangan, the south-west suburb of Jakarta. This study will explore how far the kampungs can survive amid this gentrifying urban development. This research will use a mixed-methods approach to examine the socio-spatial impacts of the new-build gentrification. First, I will conduct quantitative analysis using a survey to assess the socio-demographic changes of the kampung dwellers. Secondly, I will conduct qualitative analysis using ethnography with an intergenerational approach to explore information regarding the history of settlements and changes in land use in the research area, dynamics of land ownership, perceptions of new town development, livelihoods, displacements, as well as social interactions of kampung dwellers with new town urbanites. My research topic is relevant to one of the symposium themes 'City Governance and Structure' since new town development which is manifested by luxury residential complexes could potentially create residential segregation and socio-spatial inequality. Kampung access to public services like markets, hospitals, and public schools may be restricted because the existing basic services were designed to cater to the middle-class and upper-class urbanites living in the new town. Thus, by attending this symposium, I hope I can improve my research to receive insightful feedback from scholars with urban expertise.



Development and The Margin: Learning from Informal Spatial Practices below Flyovers in Dhaka, Bangladesh

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HDR 2G, P419, December 8, 2025, 09:00 - 10:30

The objective of this research is to investigate the relationship between infrastructural development and the resulting informal spatial practices in Dhaka, a megacity of the global south. For Dhaka, a formerly colonized city and the capital of Bangladesh, there is a predilection to prioritize big development projects such as flyovers and expressways to emulate the progress of first-world cities, as do many other cities of the global south. While donor organizations assign great importance to the development of infrastructure, many scholars argue that such development promotes inequality, marginalizes the poor and turns the city into a “marketable commodity” for the privileged groups and foreign private investors. Moreover, the spaces below the flyovers are often appropriated by the marginalized groups in the city, creating a condition of marginality oddity that emerges at the heart of these grand schemes of development and worlding. In this context as part of my PhD project I ask the following questions: How does the proclaimed goal of development negotiate with the real urban experience at ground level, as conditions of marginality are produced? From a post-colonial perspective, how does the agency of the marginalized produce space, and what relations does it create with state power and the aforementioned socio-political discourse? This paper relies on secondary data to deconstruct the political narrative of development. In addition, mapping the spatial practices below the flyovers are done to investigate the nature of the produced “marginality at the center phenomenon” and uncover the underlying power dynamics manifested at such marginal conditions. The findings will contribute to a better understanding of the ways grand development schemes in cities of the Global South shape localized spatial politics and contribute towards infrastructural harms and socio-spatial inequalities.



Flood disasters in Peru: Strengths and opportunities in collaborative multilevel governance for disaster risk reduction

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HDR 2G, P419, December 8, 2025, 09:00 - 10:30

During the last decades, flood impacts have intensified and become increasingly unequal, heightening the sense of urgency in integrating disaster risk reduction (DRR) with urban planning. Peru ranks among the three most flood-prone countries in Latin America, with over half its population highly vulnerable to floods, particularly those caused by El Niño-Southern Oscillation (ENSO). Most efforts by the national government have focused on post-flood recovery, which adopt technocratic and top-down approaches that have proven insufficient as evidenced by recurring casualties and, significant economic and environmental losses following ENSO events. These shortcomings may stem from overlooking vulnerable communities whose lived experiences could inform more effective DRR. Grounded in a critical realist ontology and constructivist epistemology, this research uses a social constructivist lens, applying a qualitative methodology and case study approach. The Chancay-Lambayeque subbasin in northern Peru is selected as the case study due to the significant impact it experienced during the 2017 flood disaster, with two embedded units of analysis: Chongoyape and Etén. The study analyses post-2017 flood recovery policies alongside community vulnerabilities examining patterns and progression through factors such as education, unemployment, poverty, and birth/death rates. It aims to uncover alignment (or misalignment) between policies and community needs for disaster adaptation. Community's lived experiences and narratives underpin this research, seeking to identify ways to reduce future disaster impacts. The study employs policy analysis, semi-structured interviews, and focus groups, with data triangulated through engagement with both disaster-affected communities and key stakeholders across multiple sectors and governance levels (policymakers at different spatial scales, practitioners, researchers, and NGOs). Initial findings show that there is a detrimental difference between what policies portray versus local experiences. This comparison contributes to understand the current context and enables the exploration of different types of knowledge and their potential integration into collaborative governance structures within Peru's disaster-related disciplines.



The remittance architecture: How spatial perception of transnational migrants are changing vernacular settlement of Bangladesh

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Globally, transnational labor migration has gained increasing recognition as a 'socio-cultural' phenomenon. Remittance houses built by transnational labors at home countries are a powerful manifestation of their complex diasporic identities. In context of globalization, where economic activities in one region profoundly influence social and cultural practices elsewhere.

In Bangladesh, the migration economy has gradually influenced the socio-spatial transformation of cities, promoting a new urbanization culture. Because of their international mobility and multicultural experiences, a new expression of transnational culture has emerged through working labors' socio-spatial perception. Remittance houses have evolved as a form of 'Globalization' that is superficially changing the socio-spatial identity of vernacular cities in Bangladesh. This research explored how complex socio-spatial dynamics of remittance; the dual nature of diasporic identities and the economic power of transnational labors are shaping post-colonial urban landscape of Bangladesh. On the contrary, remittance houses have sparked a trend of scattered and unplanned urbanization with hybrid rural-urban characteristics. This shift in societal perception of 'home' has replaced the humble appearance of the prevailing agrarian landscape, to achieve symbolic status and show off. The traditional low-rise, clustered vernacular houses were taken over by massive neo-classical mansions with front gardens. The open-plan houses with courtyards, semi outdoor spaces are substituted with rigid compact layouts.

As methods, this study adopted a multi-disciplinary approach, combining multi-sited ethnography, community mapping, in-depth interviews, discourse analysis and architectural analysis. Nearly One hundred remittance houses were physically surveyed and documented. In-depth interview of users has been a key part of this research. As a result, researcher highlighted the major attributes behind the change in architectural pattern and their positive and negative impact on the future cities and their hybrid identity.



Finding the legacies of historical planning decisions in modern neighbourhood land use patterns

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Emerging global policy ideals designed to encourage sustainable, accessible, and transit-oriented networks of housing, commerce, and industry, grapple with the reality that modern cities are comprised of legacy networks of communities, infrastructure, and buildings, that have developed over the course of centuries. While conventional economic investigations see apparently path-dependent land use structures as an unintended consequence of market agglomeration forces, the tools that policy-makers rely on to address these challenges—being the planning and property rules that constrain private rights to acquire, use, and develop land—are largely excluded from these conceptual models. This leaves little understanding of how legacy planning institutions have shaped, adapted, or entrenched fine-grained urban land use patterns, and how they ought to be reformed if transformative changes are to be realised.

To address this research gap, I first digitise twentieth-century tram network and initial land use zoning maps to measure long-run land use persistence around Sydney's defunct tramway network. A series of regression models identify a strong concentration of high-density housing and commerce around the defunct transit network, often defying the intended land use changes envisaged in early zoning ordinances. I then use historic subdivision plans to trace the process of decisions to acquire, transfer, divide, and develop land that can explain diverging rates of persistence in 'defiant' and 'adherent' neighbourhood blocks. This reveals an overwhelming pattern of residential land use protection and expansion, along with commercial land use inertia. However, this pattern was evident only in 'status-quo' neighbourhoods with historically complex and fragmented private property rights, along with limited regulatory constraints. I therefore identify path dependent urban land use patterns that arose not from the mutual economic benefits of like-minded market actors, but from historical institutional decisions to define and entrench neighbourhood-level private land use conflicts and disincentivise collaborative change.

Land Use, Planning, Property Institutions



Reimagining smart cities: Integrating Indigenous TEK principles into sustainable urban design for Brisbane

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This research examines the Traditional Ecological Knowledge (TEK) principles from Australian Indigenous communities that are most relevant to smart city design in Brisbane. In a country where cultural tolerance remains limited and Indigenous perspectives are often marginalised in policy and planning, the integration of TEK into urban development is both timely and necessary. While mainstream smart city frameworks prioritise technological efficiency, they often neglect relational, place-based knowledge systems that can guide more inclusive and sustainable futures. This study seeks to uncover how TEK can offer alternative, sustainable approaches to urban development grounded in Country and community. A qualitative, place-based methodology is used, combining literature and policy review. The research is guided by Indigenous Standpoint Theory and relational urbanism, enabling a critical lens on how TEK values, such as kinship, custodianship, and seasonal awareness, might inform urban systems design.

Preliminary findings suggest several TEK principles with strong relevance to Brisbane's smart city agenda. These include deep listening to Country, respect for non-human kin, and cyclical understandings of time and resource use. TEK frameworks also emphasise relational governance and intergenerational accountability, contrasting with dominant efficiency-focused approaches. The study anticipates that embedding these principles could reshape planning priorities to support resilience, reciprocity, and long-term care for place.

This research highlights the potential of TEK to reframe smart cities as relational, responsive, and inclusive environments. The implications extend beyond Brisbane, offering insights for urban planners, technologists, and policymakers seeking alternatives to extractive, techno-centric models. Future stages of the project will involve deeper engagement with Indigenous communities to explore how these principles might be operationalised in planning and design practice.



Recognising pluralist land ontologies: Exploring tensions between Indigenous and Western land administration in Australia

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The concept of land ownership and its administration in settler-colonial societies has long been at odds with a relational-based notion of land common to Australian Indigenous communities. While acknowledging that land tenure systems, whether customary or Western, are dynamic and subjective social constructs, Aboriginal property relations remain a simulacra of English property relations and reflect the Australian Government's understanding of what 'land' is. In land-justice discourse, this bias is problematic given that the debate on Indigenous land tenure reform is skewed towards a neo-liberal agenda of private capital accumulation at the expense of intergenerational land access and communal tenure. A power imbalance further emerges when considering that the power to administer and alter existing land tenure structures remains in the hands of settler governmental institutions that have been imposed as part of ongoing settler-colonial power arrangements.

This paper will seek to explore some of the complexities surrounding the preservation of traditional perspectives on land by focusing on how plural and relational land ontologies might be able to coexist alongside liberalist axiologies. It will do so by discussing how Indigenous property rights and interests might be strengthened while acknowledging that the Crown remains Australia's largest landholder, and any Indigenous interests will be expected to yield to its executive powers. In investigating how customary land law can be better incorporated within, or sit alongside, Australia's land administration system, I frame this discussion within the broader context of the Western Australian Aboriginal Lands Trust divestment program. The paper will examine the risks that divestment of Crown land might pose to Indigenous sovereignty and consider critically the beneficiaries of such a program.



Evaluating sustainability tools through meta-indicators: An empirical study of diverse Australian neighbourhoods

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This paper evaluates the performance, applicability, and operational efficiency of neighbourhood sustainability assessment tools (NSATs) for neighbourhood-scale sustainability evaluations. The neighbourhood scale plays a pivotal role in sustainable urban development, as it shapes everything from resource use and environmental quality to social interactions and community cohesion. By addressing sustainability at the neighbourhood level, we can effectively influence broader urban outcomes, creating spaces that are more resilient, resource-efficient, and socially inclusive. Focusing on both high-density and medium-low-density existing neighbourhoods, the research investigates how these tools assess sustainability across environmental, social, and economic dimensions. Through a comparative analysis of widely recognised NSATs, the study examines each tool's strengths, weaknesses, and relevance across diverse geographical and socio-economic contexts. By analysing data overlap, divergences, and tool-specific methodologies, the paper identifies key challenges and opportunities in applying these tools to real-world scenarios. The findings provide insights into the performance of the tools across different neighbourhood types, as well as the time and resource investments required for implementation. This paper contributes to the evolving discourse on NSATs by shifting focus from tool content to practical effectiveness, offering early insights and actionable guidance for urban planners, policymakers, and sustainability practitioners. The study intended to inform enhancements in sustainability assessment frameworks and improve the contextual adaptability of tools for diverse urban settings.



Walking vs Vending?: Relationship between informal street vending and urban walkability

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Street vending and walking often shared the same space in cities. This is especially true in the global south, where street vending has become essential to the city's physical and social fabric. This coexistence shapes how people navigate cities, as the environment and interactions around them continuously influence the way we walk in the urban landscape. At the same time, vending often gets sacrificed in the name of walkable environments, which usually ends up harming vulnerable people and communities. This research examines the patterns of interaction and conflict between street vendors and pedestrians in public spaces. Through case studies in Jakarta and Bandung, utilising non-participant observation, morphological mapping, and diagrams, the results will help us understand the intricate nature of urban informalities and how to design and regulate these shared spaces better. Early findings revealed that some of the existing conflicts within these spaces are a byproduct of the site's public space design. Existing pedestrian facilities failed to provide adequate support for enforcing the imposed regulatory regime, forcing pedestrians and vendors to adapt and self-regulate their behaviour. This creates a different interpretation of space and rules, which reshapes the dynamics of said public space and how it accommodates the conflicts between its users. The future part of the research will explore the interactions within a more diverse and chaotic site and how they shape the conflicts and synergies between pedestrians and vendors.



Beyond proximity: mapping daily routines to enhance green space equity at the block scale

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Urban green spaces (UGS), as public resources, require equitable access to promote spatial justice. However, most existing studies on green space equity rely on large-scale spatial models that assume physical proximity equates to actual access. This overlooks the block scale, where physical proximity often fails to translate into direct access in residents' daily activities. To reveal residents' daily activities, this study introduces the Participatory Mapping of Daily Routines (PMDR), a method for collaboratively mapping daily routines and key activity nodes. PMDR captures the intersection between the usage of UGS and routine tasks such as commuting, shopping, caregiving, and social activities. Unlike large-scale spatial models that measure proximity or network-based accessibility and surveys that lack spatial specificity, PMDR captures block-scale data that integrates subjective experience into spatial analysis. Each study area covers approximately 400 by 800 meters, encompassing multiple street blocks with fine-grained detail. In each area, three groups of five local residents are invited to participate in the mapping process. During the mapping session, participants discuss local landmarks to familiarise themselves with the A2 satellite map, then mark their daily routine paths on it. The result maps reveal hidden spatial patterns of UGS, highlighting where UGS align or misalign with actual usage, and exposing subtle forms of spatial exclusion that large-scale accessibility models overlook. By embedding residents' lived experiences into the analysis of spatial equity, PMDR offers a novel approach for enhancing the just distribution and design of UGS. It provides designers and researchers with resident-informed data to improve the location and connectivity of UGS. This includes aligning the design of facilities and the functions of UGS with the actual needs of diverse residents.



AI-Enhanced participatory urban design: Rethinking Brisbane's case of micromobility

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Moving through the urban fabric is central to how we experience our cities. With the continued rise of micromobility, there is a growing need to rethink how we design streetscapes to support these emerging transport modes. Currently, micromobility systems adapt to existing infrastructure, occupying roads, bike lanes, and even sidewalks, without being fully integrated into the design process. Traditional urban design methods fall on a spectrum between qualitative approaches (e.g. surveys, workshops) and quantitative methods (e.g. big data analytics). While quantitative approaches offer scalable insights, they often lack an understanding of the human experience. Conversely, qualitative methods provide depth but are time-consuming and limited in scope. To bridge this gap, this research proposes a hybrid participatory methodology integrating Generative Artificial Intelligence and crowdsourced perception surveys. Using Brisbane as a case study, the project evaluates micromobility infrastructure to inform more responsive and sustainable urban design, particularly in preparation for the 2032 Olympics.



Socio-spatial manifestations of Industrial Parks in Ghana: Location, land use and impact analysis

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Industrial Parks (IPs) have emerged as key instruments for promoting industrialisation and economic development across the Global South. Despite their growing prominence, there is limited empirical insight into their contribution to sustainable development, particularly in sub-Saharan Africa (SSA), where existing studies have largely focused on macro-economic performance. The present study addresses this gap by examining the socio-economic impacts of industrial parks in Ghana, with particular attention to how firm location choices, agglomeration economies, and government policies influence outcomes for host communities of industrial parks.

The research focuses on three industrial park communities in the Accra City Region (ACR), namely Tema, Dawa, and Appolonia, and adopts a mixed-methods approach grounded in a pragmatic research paradigm. Quantitative data were collected through a survey of 384 households, while qualitative insights were drawn from 30 in-depth household interviews, 3 focus group discussions, and 14 institutional interviews. Data were analysed using descriptive statistics, cross-tabulations, and thematic analysis.

Findings reveal that while industrial parks are intended to catalyse inclusive development, their impacts remain uneven. Host communities such as Dawa and Appolonia, in particular, experience displacement of traditional livelihoods, limited employment opportunities for low-skilled workers, and weak community engagement in planning processes. These dynamics have resulted in persistent economic insecurity, especially among women and smallholder households.

This study contributes to the literature on economic geography by framing industrial parks as contested spaces of spatial and economic transformation. It underscores the need for place-based policy frameworks, inclusive planning, and stronger governance mechanisms to ensure that the benefits of industrialisation extend to vulnerable groups and support the sustainable development of host communities.



Measuring TOD performance in the present and future: Towards successful transit-oriented development in Greater Sydney

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Transit-Oriented Developments (TOD) are acknowledged worldwide as a strategic planning instrument to support compact city form. In Greater Sydney, TODs have been primarily positioned to address housing shortages and affordability concerns, focusing on delivering housing near public transit nodes. However, broader objectives such as land-use integration, infrastructure coordination, and reduced car dependence remain underexplored.

This study critically examines what constitutes a successful TOD and proposes a systematic approach to measure both its current performance and future potential. In light of ongoing planning and policy reform in New South Wales, we introduce a comprehensive TOD evaluation framework grounded in international best practice and tailored to the unique context of Greater Sydney.

Our framework aims to: (1) define context-specific TOD success criteria aligned with local development needs and policy priorities; and establish a set of indicators for measurement; (2) develop a multi-dimensional TOD index and typology system; and (3) explore future TOD potential through spatial modelling and scenario forecasting. Methodologically, the approach integrates spatial big data, multi-criteria evaluation, advanced spatial clustering, and predictive modelling. Drawing on the Node-Place model and 6D principles, the framework expands conventional TOD analysis by incorporating indicators related to housing affordability, accessibility to services, market demand, planning readiness, and development feasibility. This framework will be applied across all Tier 1 and Tier 2 hubs in the NSW TOD Program.

This research provides an integrated approach that links transit accessibility, housing supply, infrastructure sequencing, and land use integration within a coherent framework to holistically evaluate TOD performance. Theoretically, it contributes to ongoing debates on how TOD success can be defined and measured across diverse contexts. Practically, the findings are expected to inform innovative metropolitan strategies and support cross-sectoral, evidence-based planning. The proposed framework could also offer transferable insights for global cities seeking to advance sustainable and resilient urban development.



Unpacking 50 years of metropolitan planning decisions - a Sydney case study

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This paper posits that the decision-making processes and practices of agents engaged in the development of metropolitan planning strategies may in themselves be factors in observed spatial inequality and uneven infrastructure investment.

This paper outlines initial findings arising from a post-structural discourse analysis of eight NSW metropolitan planning strategies spanning from 1968-2018. An initial text and content analysis was undertaken for each strategy and then augmented with a post-structural analysis using the “What’s the Problem Represented to be” (WPR) methodology developed by Bacchi and Goodwin (2016).

WPR focusses on understanding the assumptions that may underlie the “problem” and is a useful framework for post structural discourse analysis in that it contextualises government policy documents in the time that they were written so that the ‘conditions of its existence’ can be elucidated (Foucault 1978 in Burchell et al, 1991: 61, Lea, 2024).

WPR challenges the researcher to consider how the “problem” may have been constructed, and which agents may have been engaged in constructing the “problem”. WPR encourages exploration of where silences might exist and consideration of the discursive, subjective, and lived effects produced by the representation of “the problem” (Bacchi and Goodwin, 2016).

WPR is an approach that enables a nuanced examination of Tess Lea’s concept of a Policy Ecology, which posits that the breadth of policy is only revealed through consideration of three distinct but entwined lens’ of focus; artifactual, ambient and hauntological (Lea, 2024).

The fifty-year time frame of the eight NSW metropolitan planning strategies in this analysis creates a unique opportunity to consider all three complexions of Lea’s Policy Ecology and potentially offers a new way of identifying the drivers for decisions that shape metropolitan development, using metropolitan Sydney as a case study.



Setting a High-Bar: Using the Olympic and Paralympic Games to decarbonise urban transport

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This research assesses whether hosting the Olympic and Paralympic Games can catalyse transformative change in decarbonising urban transport systems. While the Games generate a significant environmental footprint due to increased travel demand, they are also a catalyst in accelerating urban sustainability transitions, particularly in transport, as part of the International Olympic Committee's (IOC) commitment to halve emissions by 2030.

A case study approach has compared three cities at different stages of the Olympic cycle: London 2012 (past), Paris 2024 (present), and Brisbane 2032 (future). This triple timeline perspective enables a comprehensive assessment of decarbonisation strategies across the planning, event, and legacy phases. Data is collected through document searches, participant observation, stakeholder interviews, and workshops. Analysis includes a Systematic Quantitative Literature Review, thematic analysis, policy review, and the application of transversal tools such as the Sustainable Development Goals and the United Nations transformative change framework. Findings from the literature highlight a significant research gap on urban transport decarbonisation in the Olympic context. Most existing studies focus on either general sustainability efforts or transport planning, with limited attention to their intersection. London 2012 set the scene with key transit-oriented developments around the Olympic Park, while Paris 2024 advanced decarbonisation efforts with its target of 100% public transport access to venues; both cities have extensive existing transport networks. Brisbane 2032 faces different challenges: it will host regional Games, has a car-oriented urban form and lower public transport coverage, particularly in rail, and a higher IOC climate target.

This research poses the critical question of whether transformative change is attainable under such conditions. It addresses knowledge gaps and offers reproducible best practice frameworks for stakeholders in the policy, environmental, event, urban, and transport fields. It provides insights for identifying effective pathways to leverage the Games for sustainable mobility transitions and long-term low-carbon legacies.



Exploring planning institutions' perspective on social inclusion in the context of Delhi's urban villages

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Delhi's urban development is defined by fragmented governance and overlapping mandates from several planning authorities, leading to ineffective coordination and legal ambiguity. These institutional constraints along with inconsistent planning have exacerbated existing socio-spatial inequalities. While social inclusion is increasingly topical in urban planning discourse, its practical application remains limited to infrastructure provision, failing to address systemic inequality. Urban villages, formerly rural settlements, are urban enclaves that house low-income residents and support city's local economy. Despite their socio-economic significance, many are overlooked from Delhi's larger planning framework. Outdated and exclusive planning strategies, and lack of institutional recognition, have contributed to unregulated growth, inadequate infrastructure, and the continuous exclusion from urban planning. The study examines into how Delhi's planning bodies, like the Delhi Development Authority (DDA) and Municipal Corporation of Delhi (MCD), conceptualise and implement social inclusion in Delhi's urban development. Using a qualitative technique, the study conducts semi-structured interviews with these stakeholders to investigate the fundamental principles, and planning priorities. The data collected were thematically coded to identify recurring themes and sub-themes pertaining to the research objective. Findings indicate that influence of top-down planning, lack of stakeholder participation, and obsolete regulatory frameworks are limiting the adoption of inclusive approaches. The lack of formal training of urban planners further hinders the inclusive planning and implementation. The study necessitates institutional reform through active and contextually responsive urban planning. Urban villages must be integrated into the city's planning through specialised strategies like Village Development Plans, developed in collaboration with residents. The study recommends clearer institutional roles, improved coordination between the planning agencies, and capacity training for those involved in Delhi's development. Incorporating inclusive principles, decentralising decision-making, and considering neglected settlements like urban villages are critical for fostering socially cohesive urban development.

Keywords: Social Inclusion; Urban Villages; Urban Governance; Policy Reforms; Inclusive Planning



Mapping the knowledge domains of social studies in the field of smart city

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The rapid evolution of smart cities, driven by technological innovation and data-centric governance, has ignited interdisciplinary debates about their societal implications. While most discussions about smart cities often focus on technological advancements and infrastructural efficiency, there remains a significant shortage of comprehensive research that systematically maps and critically examines the diverse social dimensions of smart city studies. This study aims to categorize the social science research within smart city studies, identifying key themes, gaps, trends, and interdisciplinary connections that shape the field.

Using a mixed-methods approach combining bibliometric analysis (e.g., keyword co-occurrence, citation network) of academic publications since 2010 and qualitative thematic synthesis, this research explores the evolution of social studies in smart city contexts. The research is conducted in the Web of Science Core Collection through Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA). The analysis highlights a growing emphasis on inclusivity framework and emerging themes such as data sovereignty, while persistent gaps exist regarding the limited integration of novel perspectives and fragmented methodologies for assessing long-term social outcomes. By visualizing co-citation networks and keyword clusters through network analysis tools (e.g., VOSViewer), this study maps domains of social studies in smart city research.



Infrastructure integration for smart and sustainable electric urban mobility

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The urgent need to decarbonise transport has placed cities at the forefront of electric vehicle (EV) adoption, yet current efforts face complex infrastructural, social, and governance challenges. This research investigates the externalities of EV uptake, and the policy and planning responses required for a sustainable, equitable, and multimodal transition to electric urban mobility. While cities account for over 70% of global GHG emissions, they also represent key innovation spaces where integrated EV and charging infrastructure (CI) strategies can advance climate action (SDG 13), improve public health (SDG 3), and foster liveable urban environments (SDG 11).

Despite increasing investment, the rollout of CI is constrained by a fixed-point problem: infrastructure lags without EV demand, and adoption stalls without infrastructure. This tension, compounded by fragmented multi-level governance and spatial planning constraints, demands a systems-oriented approach that rethinks urban transport holistically. Moreover, the rise of electric micromobility adds new layers of complexity requiring user-centred and spatially sensitive planning.

The PhD research employs a multi-method, multi-phase framework. It begins with a critical review of EV policies and strategies, followed by a public survey to understand citizen preferences for various electric mobility modes. Spatial analysis using GIS (with Brisbane and the Olympics as a case study) maps mobility hotspots, gaps, and infrastructure needs. Expert interviews further assess critical strategies for scalable and resilient e-mobility systems.

By aligning global imperatives with local realities, the study contributes original insights into multimodal infrastructure planning, behavioural adoption dynamics, and policy coherence for long-term sustainability. It proposes actionable strategies to guide urban planners, transport authorities, and policymakers towards a more inclusive, connected, and future-ready mobility system. This research advances the SOAC 2025 themes by foregrounding innovation, resilience, and long-term sustainability at the intersection of global disruption and local urban transformation.



Enhancing governance of land use and transport integration

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HDR 3D, P505, December 8, 2025, 11:00 - 12:30

In the intersection of infrastructure legacies, climate risks, and shifting investment priorities, land use and transport integration (LUTI) has remained a fundamental, yet persistently fragmented domain of urban policy in Australasian cities. This research investigates how infrastructure governance can better support integrated, resilient, and equitable city movement systems in the face of several cumulative and contextual challenges. It aims to develop and validate a governance framework that prioritises adaptive and collaborative infrastructure decision-making to reduce the gap between integrated planning and implementation. The research applies a mixed-methods approach, including a systematic literature review of 150 articles, multiple rounds of international expert surveys, and cross-case analysis, to uncover which governance arrangements can address the complexities and uncertainties around integrated development in the Australasian region and how. The resulting framework is expected to draw a clear route for cities to move away from ad hoc, infrastructure-driven expansion toward deliberately integrated development. By embedding LUTI governance within priorities such as climate adaptation, smart technologies, and equitable access, this work sheds new light on how Australasian municipalities can update their longstanding practices while advancing sustainability and innovation. Overall, it contributes to urban policy discourse by identifying the governance attributes needed to support fair, adaptive and mobility-oriented growth under shifting and unpredictable conditions.



The impact of high-density housing on public transport use

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This research explores the impact of high-density housing, particularly apartments, on public transport use in Melbourne. It was undertaken across three main stages. First, using secondary household travel survey data, a descriptive analysis revealed that apartment residents had a higher public transport mode share than separate housing residents, even after controlling for access to public transport and service frequency.

Second, an apartment resident survey (n=400) was conducted to understand the determinants of frequent public transport use among apartment residents. Results revealed that frequent users were more likely to be male, renters and have lower car ownership. The built environment played a relatively minor role in explaining public transport use. Mode choice and residential self-selection were significant predictors of public transport use, particularly for train use, while attitudes and perceptions had mixed effects.

Third, 20 semi-structured interviews were conducted with apartment residents to explore how the determinants of public transport use shape their travel decisions. They tended to use public transport to save on parking costs and car maintenance, to reduce stress, and for convenience. In contrast, safety concerns, unreliability, low service frequency and high perceived costs of public transport deterred use. In addition, everyday experiences, personal characteristics, and contextual conditions were found to shape their long-term attitudes towards public transport.

Findings have several urban policy and transport planning implications. Apartment development policies should extend beyond proximity to infrastructure and place greater emphasis on user-centred factors, such as enhancing service quality and improving urban conditions for active mobility. Public transport policies, in turn, should prioritise making this mode more convenient and affordable than private car use. This can be supported through a combination of effective fare strategies, safer and more comfortable services, and measures that discourage car ownership and use, as well as regulate parking availability and cost.



How does one model a regional mega-event? Developing a methodological framework for the Brisbane 2032

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Approximately sixty percent of the tickets to the Brisbane 2032 Games are projected to be purchased by residents of Southeast Queensland. The aim of this paper is to develop a methodological framework to research two key challenges for the 2032 Games. The two challenges this paper focuses on are i) the residential “base layer” travel, which is the non-Games travel of those living in the SEQ region during the Games period; and, ii) the non-ticketed event travel during the Games, which is travel by both visitors and SEQ residents to events such as the marathons, cycling road races, the triathlons, surfing, sailing, and more. This requires predicting travel choices of residents during the event, distinguishing between regular daily travel and event-related travel, and identifying the propensity to travel, the peak travel times, and modes of transportation to popular non-ticketed events. Predictor variables include sociodemographic variables, residential proximity to event venues, the availability of transportation options, and the transportation policies (such as hypothecated ‘free’ public transport fares and parking restrictions) applied during the Games. These are important inputs into the models being developed by the Queensland Department of Transport and Main Roads to forecast travel demands during the Games period. The approach to both challenges is to use past event data from the Gold Coast Commonwealth Games, from previous Olympics, and from online stated preference cross-sectional surveys. The outcome of this and the other modeling work by the broader team will produce a set of agent-based models to aid forecasting. This research builds on previous studies on mega-events and host community travel choices but is also novel, partly due to the regional nature of the 2032 Games.



Developer behaviour, housing, and natural hazard risk

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There is a growing impetus to model how the deregulation of housing supply in response to unaffordability will affect future land use change. However, current models of urban land use change often assume that developers are homogenous, failing to recognise the diversity and plurality of the sector and how differences in developer behaviour and decision-making may affect land use outcomes. Significant features of this diversity in a New Zealand context include the strong and growing role of Māori in development and the importance of small homeowners/investors. To remedy this, my research is identifying and analysing diversity in the behaviour and decision-making of housing developers when deciding whether to purchase, develop, and/or sell sites. Special attention has been given to sites subject to natural hazard risk(s) and the impact of policy interventions intended to control or manage development in at-risk areas. This will be achieved through a systematic comparative international literature review and a series of surveys, interviews, and workshops with developers. Key findings to date include the significant diversity that exists between developer types in the prioritisation of key variables and values that determine whether they choose to invest in an at-risk site; diversity of reactions to natural hazard risks and disparities in the efficacy of common risk communication tools between regions; and the vital role of the insurance sector in determining future land use change patterns and natural hazard risk exposure. Future work will focus on integrating the research data with existing economic conceptual models of development to provide an understanding of how developers receive and respond to risk signals. It will also explore ways to represent how the spatiality of risk and the spatiality of development intersect, providing a basis for evaluating how current, proposed, and hypothetical hazard policy interventions can be designed to more effectively influence development.



Infrastructures of care and housing affordability: The everyday experiences of low-income older women

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This research paper explores how low-income older women navigate housing affordability through the lens of infrastructures of care, focusing on government-initiated rental housing projects. Drawing on the infrastructures of Care framework outlined by Power and Mee (2020), this study explores how low-income older women, with support from family and community networks, access secure tenure, negotiate costs and maintain well-being within formal rental housing. As precarious dwellers, older women are more vulnerable because of the ineffective welfare support, socio-economic challenges, poor health conditions and climate impact and find it challenging to secure adequate housing and care. Based on in-depth semi-structured interviews with four older women residents and housing officials in the 'Residential Rental Flats for slum dwellers at Mirpur (RRFSDM)' in Dhaka, Bangladesh, this research finds that intergenerational care and the project's location functioning as geographies of care that enabling continuity in informal livelihoods and social ties acting as central to secure tenancy. Furthermore, the role of social values- prioritizing families with older parents in beneficiary selection reflects how the infrastructure of care mediates access to state-initiated housing. while residents are often willing to sacrifice other needs for tenure security and a healthier environment, the aspiration of ownership in a affordable and stable payment system persist. By focusing on the intersections of aging, gender, informality and care infrastructures in the Global South, this paper offers a comparative lens for Australasian cities. It contributes to ongoing debates on housing affordability, care-based urban governance and aging-in-place, offering policy insights to cities across Australasia struggling with demographic transitions, care pressure and inclusive housing strategies.

Key Words: Affordability, Infrastructure of care, Older Women, Low-income, Urban Poor, Dhaka, Bangladesh, Australasian cities



Housing as a feminist issue

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Housing is a critical yet often overlooked women housing issue in Kuching, Sarawak. This research investigates how gender disparities influence women's access to housing and the broader implications on their life choices and outcomes. This study sheds light on the unique challenges women faces in securing suitable, adequate and affordable housing. The study aims to explore the specific housing challenges encountered by women in Kuching, particularly how existing housing policies and market conditions affect their access to secure and suitable living environments. A qualitative approach was employed as a research methodology for this research, featuring semi-structured interviews with 60 womens from diverse socioeconomic backgrounds, including both homeowners and renters. These interviews were complemented by non-systematic observational data from participants' homes and neighbourhoods to provide contextual insights. The data were thematically analyzed using NVivo to uncover the gendered dimensions of housing access and preferences in Kuching. The findings will reveal significant barriers for women in accessing affordable and quality housing from the perspective of different household income group. The findings are expected to call for an inclusive approach to housing development that ensures equitable access for women, contributing to a broader understanding of gender issues in urban planning. This research will offer valuable insights for policymakers, planners, and developers in Sarawak and beyond towards gender-sensitive housing policies that account for the specific challenges faced by women in Kuching. Internationally, this is one of few studies set in the Global South that consider housing from the perspective of gender.



Where two Songlines meet: Regenerative urbanism and net zero innovation at Curtin Exchange precinct

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Overview:

Net-zero strategies are commonly framed through mitigation, environmental performance, and impact reduction, particularly within energy and engineering disciplines. Regenerative urbanism, by contrast, draws from ecology, architecture, and social systems, aiming to restore ecosystems, support biodiversity, and improve human wellbeing. While net zero provides a target, regenerative design offers a pathway that is both ecologically restorative and socially just. Despite their distinct origins, these approaches share complementary goals. However, integrated frameworks that combine both remain limited, especially at the urban scale. This paper explores the intersection of net zero and regenerative urbanism, focusing on planning and design strategies applicable at the precinct level. The Curtin Exchange precinct in Perth, Western Australia, is examined as a case study to demonstrate how these dual strategies operate in practice. Findings inform a proposed “net zero regenerative” framework, offering practical guidance for integrating carbon reduction and ecological regeneration in precinct-scale development.

The Curtin Exchange precinct reflects a growing trend among Australasian cities that are leading the way in integrating nature into urban development to address socio-ecological challenges. This case offers transferable insights for other cities aiming to align net zero goals with regenerative design that supports environmental restoration and community wellbeing.



Valuing urban greenery in Christchurch city centre: Advancing sustainable housing, resilience, and community cohesion post-earthquakes

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Despite progress in post-earthquake recovery, Christchurch city centre continues to struggle with attracting long-term residents. The Central City Housing Programme, Project 8011 initiated in 2018 with a target population of 20,000 by 2028, has failed to meet its objectives.

Current housing development trends favour one- and two-bedroom townhouses that often lack adequate parking and private outdoor spaces, while simultaneously experiencing growing conversion to short-term rental accommodations. This development pattern has negatively impacted community cohesion and housing stability rather than supporting sustainable residential growth.

This situation calls for a fundamental rethinking of Christchurch city centre's approach to urban development, one that better integrates environmental, social, and economic considerations through a focus on long-term ecological and social value creation (Reed, 2007).

Combining resident interviews with hedonic pricing analysis, this research investigates how city centre dwellers value the interplay between built and natural environments. Interview findings underscore residents' strong appreciation for urban greenery, particularly its role in fostering neighbourly connections and enabling community activities.

To quantify these aspects, the hedonic price modelling incorporates both macro- and micro-scale (eye-level) analyses, using satellite-derived Normalized Difference Vegetation Index (NDVI) data from 2018 and 2023 for broader green space assessment, and semantic segmentation of 29,389 Google Street View images for detailed tree canopy evaluation.

The results demonstrate significant property value premiums associated with both high levels of tree canopy coverage and proximity to pocket and community parks. These findings offer concrete policy implications for urban development, suggesting that investments in urban greenery can simultaneously enhance social connectivity, environmental quality, and economic value. The study ultimately advocates for more holistic urban planning approaches that prioritise long-term sustainability and liveability in Christchurch city centre's ongoing regeneration.



Developing a climate resilient framework for healthy cities

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The impact of climate change on physical, mental and social health and wellbeing is well established and the nexus between climate, health and wellbeing and built/natural environment is an emerging field of research. Recent bibliometric review of literature in urban studies and planning has identified the need for trans-disciplinary research around urban governance, climate and health and wellbeing for sustainable development. This research addresses this gap and approaches the nexus between climate, health and wellbeing and cities from an urban governance point of view, trying to identify how the sectoral and often siloed approach can be intervened with a more systems approach, establishing the important role of multidisciplinary teams within local governments in designing and implementing urban frameworks. This study will review the existing frameworks and use qualitative case study as a methodology at a city scale with interviews and focus group discussions with local government officials as the primary stakeholders through a participatory approach. Further, this research will explore the growing landscape of literature around 'climate urbanism' and 'sustainable urbanism' and how these concepts can be embedded in designing a robust urban climate resilient framework with public health and wellbeing considerations through a critical theory approach. All the findings through these approaches will be used to guide the development of toolkit to map the process of developing a framework in addition to the framework as a research output. It will also result in a policy brief with policy recommendations for different levels of government for bridging the gap between high level policies and local action plans. This research will be highly relevant to these conference themes- City Governance and Structure, City Health and Liveability and City Nature and Environment and contribute to the much-needed interdisciplinary research in the field of urban studies and planning.



Who are parks really for? Rethinking user recognition in green space planning

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Urban greening initiatives are often guided by the principle of “parks for all.” However, such a universalist framing can obscure the distinct needs and preferences of diverse social groups. This study examines how user characteristics are or are not recognised in green space planning in Shanghai Central City, shifting the focus from distributive justice to the underexplored dimension of recognition justice.

Drawing on 38 semi-structured interviews with planners, government officials, and researchers, the research investigates how demographic and socioeconomic characteristics influence park provision across four dimensions: adequacy, availability, accessibility, and attractiveness. Thematic analysis reveals that while age-based groups such as children, elder adults, and people with disabilities are somewhat acknowledged, other groups—such as migrants, low-income residents, and young adults—are largely overlooked. Top-down planning approaches dominate, relying on expert-led data analysis and standardised targets. Public participation remains limited, and planning processes often privilege elite voices while excluding marginalised communities.

The findings highlight three key barriers to recognition: the institutional dominance of rigid greening targets, limited mechanisms for inclusive participation, and fragmented governance. Despite growing awareness among practitioners, the institutionalisation of user recognition remains weak.

By documenting these challenges, the study contributes to a deeper understanding of environmental justice in urban green space planning, especially within government-led planning contexts. The insights from Shanghai resonate with challenges faced by Australasian cities seeking to balance environmental performance metrics with socially inclusive planning. As both regions aim to enhance urban resilience and sustainability, this research encourages planners and policymakers to embed recognition justice into green infrastructure governance.



Evaluating the strengths of multiple pathways linking urban green space to cardiovascular mortality

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Background: Urban green spaces have been increasingly recognized for their health benefits, particularly in relation to cardiovascular disease (CVD). However, the specific pathways through which green space influences CVD mortality remain unclear. This study aims to comprehensively explore the mechanisms—mitigation, restoration, and instoration—linking green space to CVD mortality.

Methods: We conducted a cross-sectional analysis using Population Health Area (PHA) data from metropolitan Melbourne, Australia. Green space characteristics, including vegetation, accessibility, and experience of nature were assessed in relation to CVD mortality. Partial Least Squares Structural equation modeling (PLS-SEM) estimated direct and indirect relationships through environmental (air pollution and urban heat island effect), behavioral (physical activity and social cohesion), and psychological (stress) mediators.

Results: Higher tree cover was associated with lower all CVD mortality ($\beta = -0.15$, $p < 0.1$), likely due to its role in reducing air pollution, mitigating urban heat, and promoting physical activity and social cohesion. Biodiversity, measured by bird species diversity, showed an association with increased ischemic heart disease ($\beta = 0.16$, $p < 0.1$) and cerebrovascular disease mortality ($\beta = 0.14$, $p < 0.1$), potentially linked to unexamined ecological or health-related factors. Accessibility to green space, measured by proximity to public parks, was not directly associated with CVD mortality, suggesting that proximity to parks may not be a key determinant of CVD mortality. Despite identifying significant relationships between green space and mediators, no statistically significant indirect effects on CVD mortality were observed.

Conclusion: These findings suggest that urban green space, particularly tree cover, may directly benefit cardiovascular health rather than through intermediate pathways. The results underscore the importance of integrating urban tree cover into public health and urban planning strategies. Further research is needed to refine green space metrics and investigate long-term health impacts through longitudinal studies.



Cooling with justice: A configuration-based governance framework for urban heat resilience

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Urban governance is increasingly judged by its capacity to translate high-level justice promises into the day-to-day allocation of critical resources, yet decision-makers still lack tractable metrics that expose the trade-offs hidden inside those choices. Urban heat mitigation is no longer just a technical optimisation problem; it is a governance challenge rooted in the interplay of neighbourhood form and decision-making authority. This paper uses a fuzzy-set Qualitative Comparative Analysis to explore how built-environment and socio-economic configurations lead to two governance outcomes: heat resilience and distributional justice. Using census-tract data from 44 U.S. cities, we identify multiple configuration-specific pathways that can deliver cooling, justice, or both. These pathways are visualised in a two-dimensional cooling–justice configuration space for planners, metropolitan agencies, and community coalitions. The implications will enable decision-makers to (i) diagnose neighbourhood types structurally locked into poor outcomes, (ii) debate explicit trade-offs between maximum cooling and equitable cooling, and (iii) design governance instruments tailored to the configurations they face. By foregrounding the need to select among alternative governance trajectories rather than search for a single optimum, the study contributes practical tools and critical insights to evolving metropolitan governance under rapid urban transitions.



Developing collaborative governance frameworks with a systems thinking approach for managing water in changing climate

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The traditional governance arrangements of water in our complex urban environments are challenged by the wide-ranging impacts of climate change. It is unclear if current approaches to water governance are appropriate for adapting to climate change. Effective climate change adaptation strategies are widely acknowledged to require meaningful and genuine collaboration between different levels of government, communities, Indigenous peoples and other stakeholders to achieve sustainable and fair outcomes. New governance frameworks are needed to enable effective climate change adaptation strategies for urban water management. This research presents an analysis of how existing water governance frameworks incorporate climate change adaptation by considering how they include of collaborative governance and systems thinking concepts.

Collaborative governance involves establishing a clear purpose that aligns with the goals of all participants. This requires defining shared objectives and ensuring that those involved in the process adequately represent varying perspectives and expertise. Rules for inclusivity and consensus-building should be established to empower all voices, ensuring equitable participation. Adopting a systems thinking approach will complement collaborative processes. Research has shown that systems thinking, where the whole and its fit and relationship to the environment is the primary concern, is essential for water governance processes and climate change adaptation. The approach also includes structured communication processes and decision-making protocols to facilitate engagement among stakeholders.

Additionally, mechanisms for monitoring and evaluating the outcomes of collaborative efforts, provide opportunities for continuous improvement and adaptation to emerging challenges.

This research presents an analysis of existing governance frameworks against systems thinking and collaborative governance theory. This analysis is a first step to proposing practical improvements to existing water governance frameworks to enable organisations to better navigate the challenges of managing water in a changing climate, ultimately benefiting urban communities.



Making invisible visible: Exploring 'unexpected collaborations' in urban life through feral ecologies

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Despite increasing interest in integrating nonhuman actors into participatory planning and design processes, there is a lack of interest of how these processes provide a foundation for the involvement of these actors. However, for this enquiry it is important to understand the inherent limitations of the current practices in recognising the roles and agencies of nonhuman actors. Following this, this research seeks an alternative perspective that recognises the involvement of nonhuman actors. This perspective investigates the existing involvement of nonhuman actors by acknowledging that they are already engaged in urban life rather than integrating them into often limited processes of human participation. In this context, this research focuses on “feral ecologies” as a critical lens to understand how current planning and design practices both reveal and constrain the involvement of nonhuman actors in urban life and what is required to foster more-than-human futures. In other words, this research aims to move the urban governance that underpins planning and design practice from a tokenistic inclusion of nonhumans at the participation stage towards an ethical, anticipatory stewardship that recognises and works with the feral agencies already present in the city. Guided by the concept of feral ecologies, this research traces how existing planning and design practices simultaneously expose and constrain nonhuman involvement, while also identifying upstream sites of intervention—such as professional education—where multispecies ethnography or analogous methods could reshape planners' axiologies. Ultimately, this research seeks to illuminate pathways for a transformation of urban governance that enables just more-than-human futures.



Reimagining the capital: A feminist planning framework for building an inclusive and sustainable Nusantara

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Urban planning has historically marginalized the requirements of women, thereby perpetuating disparities in economic, social, environmental, and various other sectors. This phenomenon continues to manifest in newly established capital cities since the twentieth century, which frequently replicate these inequities notwithstanding their recent inception. As feminist paradigms become increasingly recognized, there exists an urgent imperative for the development of frameworks that incorporate these perspectives to cultivate more sustainable and equitable urban settings. This research proposes a conceptual framework, called the Pentangle Model of Feminist Planning, a modified model Hirt and Campbel's Planner's Pentangle Model, which aimed at the integration of feminist perspectives within the planning and design of new cities. By employing a dual methodological approach—Plan Quality Evaluation and Thematic Analysis, this study critically assesses the planning and design of Nusantara, Indonesia's newly capital city in five dimensions: Economy, Equity, Environmental, Aesthetics, and Wellbeing. The findings reveal that Nusantara's masterplan lacks explicit gender integration, posing a serious risk of replicating existing structural inequalities in a new setting. The study recommends that certain gender mainstreaming mechanisms be properly institutionalized, certain gender-disaggregated data be properly integrated into all of the planning stages, participatory and intersectional approaches be properly adopted, and care infrastructure development be particularly prioritized to align with certain global best practices and feminist urbanism. Toward strengthening these dimensions is necessary so Nusantara realizes a vision that is an inclusive, resilient, and socially just "Global City for All".



Shaping tomorrow's regions: A systematic review of industry 4.0's role in regional development

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Abstract

The current era has witnessed an unprecedented dependence on digital technologies, with Industry 4.0 transformations becoming a global reality. While effective implementation of these technologies can enhance regional socioeconomic performance and competitiveness, concerns persist regarding their impact on regional disparities. Despite numerous countries introducing digital adoption strategies, 'one-size-fits-all' approaches fail to accommodate regional variations in technological readiness, infrastructure, and human capital. Many scholars argue that robust policies must adopt region-specific frameworks tailored to each region's unique technological transformation profile. Consequently, non-geographically targeted policies risk exacerbating regional development disparities through uneven adoption of emerging technologies. This study aims to comprehensively examine the current body of knowledge regarding Industry 4.0 in the context of regional development. Using a systematic literature review (SLR) methodology, we will analyse academic materials published from 2015-2025 that address the intersection of Industry 4.0 implementation and regional development. The primary objective of this study is to identify existing knowledge gaps in this emerging field by systematically mapping current research. The findings will provide a foundation for future investigations and policy considerations regarding the implementation of Industry 4.0 technologies in different regional contexts, with particular attention to preventing the widening of regional disparities.

Keywords: Fourth industrial revolution, Regional planning, Digital transformation, Systematic literature review, Regional disparities



Understanding Sustainability from a Local Governance Perspective

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Sustainability has become a critical global priority, yet its effective implementation largely depends on the capacities, actions, and governance of local actors—particularly local governments. In cities, which are primary local centers and home to over half of the world's population, tensions often emerge between established local agendas and the transformative demands of sustainability transitions. This dilemma underscores the importance of governance in integrating sustainability into local frameworks. However, the complexity of governance, along with its varied definitions, has led much of the current literature to focus on specific aspects—such as policies, strategic planning, or local initiatives—without providing a holistic perspective to fully explore their interconnections with sustainability. This study addresses this gap by drawing on existing literature and theoretical frameworks to analyze local governance at two levels: the intentional level, which examines the images, instruments, and actions utilized by actors, and the structural level, which considers underlying conditions, enablers, or impediments. By integrating fragmented analyses and synthesizing insights from the literature, this study aims to demonstrate how local actors interpret and operationalize sustainability intentionally within their unique social, economic, and environmental contexts. This research contributes to a deeper understanding of the dynamic processes of governance essential for achieving sustainability at the local level.

