



Melbourne Centre
for Cities

URBAN RESILIENCE AND INNOVATION IMPACT REPORT

2021 - 2022





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INTRODUCTION AND OVERVIEW

The City of Melbourne Chair in Urban Resilience and Innovation is a collaboration between the University of Melbourne and the City of Melbourne. It aims to jointly foster and translate research that informs and enhances policy response to urban resilience opportunities and challenges (such as climate change), resulting in urban innovation and knowledge generation. The Chair also provides scholarship and thought leadership to strengthen community engagement for a thriving knowledge city. Professor Sarah Bell commenced as City of Melbourne Chair on 1 February 2021 and is working to connect the urban resilience and innovation activities of both the City and the University.

PEOPLE

The Urban Resilience and Innovation program has been renewed at University of Melbourne (UoM) resulting in a greater number of resources. The Chair's role has been leveraged to create a research group of staff and PhD students. The UoM team consists of:

- Prof Sarah Bell, City of Melbourne Chair (commenced 1 February 2021)
- Dr Melanie Lowe, Research Fellow (commenced March 2021, two year contract)
- Marita Doak, Project Officer supporting the City of Melbourne partnership (commenced May 2022)
- Enzo Lara-Hamilton, Research Assistant in the Retrofit Lab (commenced October 2021)
- Merrick Morley, PhD student working on community resilience in December 2020 and a Research Assistant on the Healthy Cities and the Pandemic project
- Danial Naqvi, part of a joint Melbourne-Manchester PhD, studying smart city innovation and sustainability (commencing August 2022)
- Two new PhD students will be recruited and enrolled during 2022-23

The program and staff are hosted in the Melbourne Centre for Cities (MC4C). This enables collaboration with MC4C programs with close links to City of Melbourne (CoM), including work on localising the Sustainable Development Goals and the night-time economy.



The University of Melbourne Team: Left to right: Enzo Lara-Hamilton, Dr Melanie Lowe, Prof Sarah Bell, Merrick Morley and Marita Doak



PARTNERSHIP AND GOVERNANCE

Steering Committee

The partnership between the CoM and The UoM is overseen by a formal Steering Committee, which meets twice a year. The members are:

- Evan Counsel (Chair, CoM)
- Linda Weatherson (CoM)
- Krista Milne or Tiffany Crawford (CoM)
- Julie Willis (UoM)
- Michele Acuto (UoM)
- Sarah Bell (UoM)

An Urban Resilience and Innovation Forum has been established to meet every two months to provide closer engagement and guidance across Council. The membership is open, and core members include Directors from across council. The Forum has evolved into a focus group, fostering a Community of Practice and space for members to share and discuss common concerns, best practice and innovation within the scope of urban resilience.

Co-ordination

Professor Bell meets at least every two weeks with the Managers of City Resilience and Sustainable Futures from the CoM. Throughout 2022 the greater UoM and CoM teams meet every two months to share ongoing work and plan future projects and research outputs.



PROJECTS

Urban Resilience for Local Government

A key output of the program in 2021 was the Urban Resilience for Local Government framework, in collaboration with the CoM City Resilience and Sustainable Futures team. The framework provided a clear definition of resilience, and outlined 10 qualities of resilient city systems, which will be the basis for further application and analysis across council and in collaborative research. The outputs were; an Issues Paper, titled *Urban resilience for local government: Concepts, definitions and qualities*, a Briefing Paper, titled *Urban resilience for local government* and a launch event held on the 29th of November 2021. The launch event, titled *Urban Resilience: What's next for Melbourne*, outlined the urban resilience framework, highlighting the updated definition of urban resilience:

"The capacity of individuals, communities, institutions, businesses and systems within a city to adapt, survive, and thrive no matter what kind of chronic stresses and acute shocks we experience, and to positively transform as a result"

A panel discussion explored how the updated framework can be applied by state and local governments, chaired by lead author Dr Melanie Lowe. Panellists Deputy Lord Mayor Reece, Andrew Wear, Joel Backwell and Professor Sarah Bell, discussed the current importance of urban resilience, how we can better prepared for city challenges, and the role of the unique and evolving partnership between the CoM and The UoM via Professor Bell's appointment in the Melbourne Centre for Cities. The online event was attended by 112 people, with a follow up email reaching a network of 5,200 people. The framework was also presented at the 2021 State of Australasian Cities Conference by David Sweeting, Elissa McMillan and Professor Bell.

Prepare Melbourne

The UoM program is working to support the Prepare Melbourne major initiative (MI52) with research and evaluation. This included contributing to a report into the major shocks and stresses facing Melbourne now and in the future. The UoM team provided an international desktop review of shocks and stresses, and supported a methodology for identifying key issues facing Melbourne. UoM are exploring opportunities for funding from the Australian Research Council to analyse MI52 in comparison to case studies from other cities.

The Retrofit Lab

The Chair is working to strengthen policy responses for a thriving knowledge city, through a major work stream commenced with CoM on a Retrofit Lab for Melbourne. This emerging program aims to provide evidence and innovation to support jobs creation in construction and the built environment through retrofitting existing buildings, infrastructure and landscape to respond to the climate, biodiversity and public health emergencies. The program is working with unions, developers, property owners, consultants and policy-makers to accelerate retrofitting, using the Melbourne CBD as a test-bed. The BREATH project to test ventilation retrofitting is one of the first outcomes of the program, and is a collaboration between UoM, CoM and CBUS Property. The Retrofit Lab is developing proposals for research funding to support a long-term program of work in collaboration with partners.

Resilience and the Sustainable Development Goals

In 2022, the UoM team will work with the City Resilience and Sustainable Futures team to identify how Sustainable Development Goals (SDGs) can align with the Urban Resilience Framework. This will identify which of the SDGs targets and measures that relate to resilience and any gaps in monitoring that may need to be addressed to help evaluate and benchmark resilience in CoM activities and outcomes.

Healthy Cities and the Pandemic

In 2021, Dr Lowe was awarded a University of Melbourne Early Career Research Grant (\$25,000) to undertake a project entitled 'Impacts of the COVID-19 pandemic on progress towards healthy cities'. Using Melbourne as a case study, the research investigates if and how responses to the pandemic have accelerated or undermined planning of healthy, resilient cities. Merrick Morley has been the research assistant working on this project, in collaboration with Dr Lowe and Professor Bell.



Melbourne - Manchester Innovation Districts Collaboration

Dr Lowe is a lead investigator on this interdisciplinary collaborative project which explores how Innovation Districts (IDs) can address goals of societal equity, inclusivity and sustainability, at a metropolitan-wide scale. The team from the University of Melbourne and University of Manchester are engaged in joint research and sharing insights from case studies of mission driven IDs. These IDs integrate societal and sustainability goals and explore lessons for other new urban development models.

Global Healthy and Sustainable City-Indicators Collaboration

Dr Lowe is a lead investigator of the Global Healthy and Sustainable City-Indicators Collaboration, involving researchers and policymakers from 25 cities across 19 lower-middle to high-income countries. As part of the Collaboration, Dr Lowe has co-led assessment of city health and sustainability indicators for the 25 cities, now published as a Lancet Global Health Series on urban design, transport and health, and has helped established the Global Observatory of Healthy and Sustainable Cities
<https://www.healthysustainablecities.org/>





EXTERNAL ENGAGEMENT

The Chair and team have undertaken regular public engagements to enhance the visibility and the impact of the Melbourne Resilience and Innovation agendas. Professor Bell and Dr Lowe have participated in events generating urban resilience knowledge and uptake including:

- State of Australasian Cities Conference 2021: Dr Lowe was Co-chair of the City Health and Liveability conference track, chaired a keynote session, and presented a paper. Professor Bell co-presented a paper with the Elissa McMillan and David Sweeting of the CoM City Resilience and Sustainable Future team.
- Innovate4Cities Conference 2021, Oceania Cities and Climate Resilience Panel: The event was chaired by Professor Bell, the panellists included Tiffany Crawford (CoM). The session attracted the highest attendance across the conference, with 611 people in attendance.
- MPavillion Designing Resilience 2022: Co-chaired by Professor Bell and Danielle Jewson (CoM), panellists included Tiffany Crawford (CoM). The in-person event was attended by approximately 50 people.
- Melbourne Design Week 2022, Politics and Utopia in Architecture Series: Dr Lowe was a Panelist for 'The Post-Pandemic Anthropocene' webinar.
- Architectus (architecture and urban design consultancy) Design Charette, Melbourne: Dr Lowe presented on 'Designing healthy neighbourhoods for urban resilience'.
- Master Builders Association industry breakfast: Professor Bell joined the panel to discuss keynote speech by Lord Mayor Sally Capp, 175 people attended this in person event.
- Transform 2020, The Green Building Council of Australia conference: Professor Bell was a panellist on the Resilient buildings and Communities panel, an online event, attended by 40 people.

- Health and Human Services Climate Change Adaptation Action Plan 2022–2026: Dr Lowe co-authored a submission to the Victorian.

Professor Bell's additional academic speaking engagements have included:

- Keynote at the Istanbul Policy Centre Conference on Climate Responsive Urbanism
- Seminar at the University of San Diego Engineering Social Justice Exchange
- Paper presented at the AQUA360 conference
- University of Melbourne–Chinese Academic of Social Science symposium
- Water and the Social Sciences symposium at the University of Melbourne

Professional Recognition

In 2022 Professor Bell was admitted as a Fellow of Engineers Australia, in line with her previous qualification as Fellow of the Institution of Civil Engineers, and Chartered Institute of Water and Environmental Management. In 2021 she was appointed Visiting Professor at University College London.

Professor Bell joined the international advisory committee of the Community Water Management for a Liveable London (CAMELLIA) project. She provided mentorship for a mid-career engineer in Kenya through a Royal Academy of Engineering program and was a reviewer of research proposals for the European Commission, and national research councils of Ireland and Belgium. She was a panellist for the University of Melbourne Architecture, Building and Planning International Women's Day event, and is a member of the steering committee for the Women's Research Leadership Development program.

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This Report is an output of the City of Melbourne Chair in Urban Resilience and Innovation, which is an ongoing research partnership between The University of Melbourne and the City of Melbourne.

About the Melbourne Centre for Cities

The Melbourne Centre for Cities is designed to address the challenges that city leadership faces, and the information it needs, in an interconnected and increasingly urbanised planet. The University of Melbourne actively seeks to extend linkages between education, research and practice, and aims to inspire learning through interdisciplinary reflection, and its integration of research teaching and practice around the implications of all forms of urbanisation.



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