



Lead Research Partner
University of South Australia



Industry Partners
Department for Environment
and Water (DEW)

City of Adelaide

Power Tech Energy Pty Ltd

Sustainable Energy
Commitment Pty Ltd

ABOUT

Location: Adelaide SA,
Karna Country

Size: 0.5km long. 700 retailers

Typology: Mixed-use

Status: In operation

Rundle Mall is Adelaide's iconic "Shopping and Living" precinct, centrally located in the CBD and poised to become a net-zero exemplar. With over 700 retail outlets, 300 service providers, and 15 arcades and shopping centres, coupled with a diverse mix of ownership, it reflects the governance complexity of legacy city centre retail hubs across Australia. The precinct is a focal point for the City of Adelaide's Integrated Climate Strategy 2030, which sets bold goals for resilience and decarbonisation. Ambitions include a 50% reduction in community emissions and full electrification of homes and businesses, leveraging South Australia's world-leading renewable energy grid.

This project site presents a unique opportunity to investigate the governance barriers affecting net-zero adoption among building owners and tenants. The research will employ ethical methodologies to analyse data provided by the City of Adelaide and engage stakeholders across the precinct. Two coordinated approaches will be used: (1) detailed surveys and interviews to identify governance drivers and barriers, and (2) modelling of baseline energy use and retrofit strategies to assess energy efficiency potential. Insights from both approaches will inform recommendations for improving energy performance through retrofitting, while also examining how tenure arrangements, along with any relevant regulatory obligations, can support net-zero transition.

HIGHLIGHTS

01

Rundle Mall is a legacy precinct in Adelaide's CBD and the first major Australian retail precinct to be studied as a net-zero case site.

02

Rundle Mall's fragmented/diverse ownership offers a rare opportunity to explore governance barriers and collective action in legacy city centres.

03

Rundle Mall demonstrates leadership in waste reduction and circular economy practices, including Australia's largest green bin trial in a retail setting.

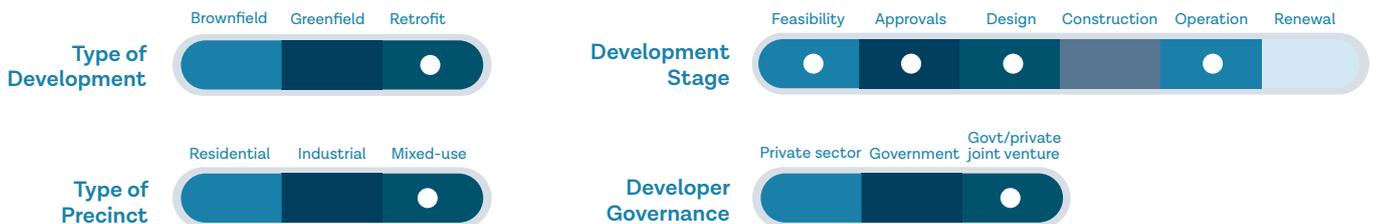
KEY RESEARCH QUESTIONS

What governance models and mechanisms help mixed-use precincts like Rundle Mall reach net zero?

How do ownership and tenancy structures influence the readiness and capacity of property owners and managers to adopt net-zero strategies in mixed-use precincts?

Which retrofit strategies (e.g. digitalisation, CER panels, gas removal/electrification) are most appealing to occupants and owners, and why?

CASE STUDY FEATURES OF INTEREST



1. A CULTURE OF SUSTAINABILITY

The City of Adelaide's Integrated Climate Strategy 2030 sets bold goals for Rundle Mall's net zero transition, including full electrification of homes and businesses and a 50% cut in community emissions. The city also demonstrates strong sustainability leadership through implementing sustainability initiatives like launching Australia's largest green bin trial in a retail setting.



2. AVOIDING UNNECESSARY CARBON EMISSIONS IN UTILISING LAND

Rundle Mall's redevelopment has focused on revitalising existing infrastructure rather than expanding into new land, preserving embodied carbon and minimising disruption. The site's transformation into a pedestrian-only zone since 1976 has also reduced transport-related emissions over time. Retrofit constraints, including heritage rooftops, structural load limits, and shading, bring added complexities to the redevelopment.



3. SHIFTING TO LOWER CARBON EMISSIONS IN DEVELOPMENT PROCESSES

Recent upgrades at the site, including paving, lighting, and landscaping, have incorporated sustainable materials and design principles. Future plans involve enhancing shade and natural cooling by planting trees or installing more shade-like structures.



4. IMPROVING PERFORMANCE WITH LOWER CARBON TECHNOLOGIES

The precinct has trialled multi-bin systems for organic waste and compostables, diverting waste from landfill and supporting circular economy goals. Additionally, the city's sustainability incentives scheme supports lower carbon technologies like solar PV, energy storage, EV chargers, and insulation, by offering cash rebates that reduce upfront costs and accelerate emissions reductions.

INITIAL LEARNINGS

PRELIMINARY INSIGHTS FROM THE CASE STUDY

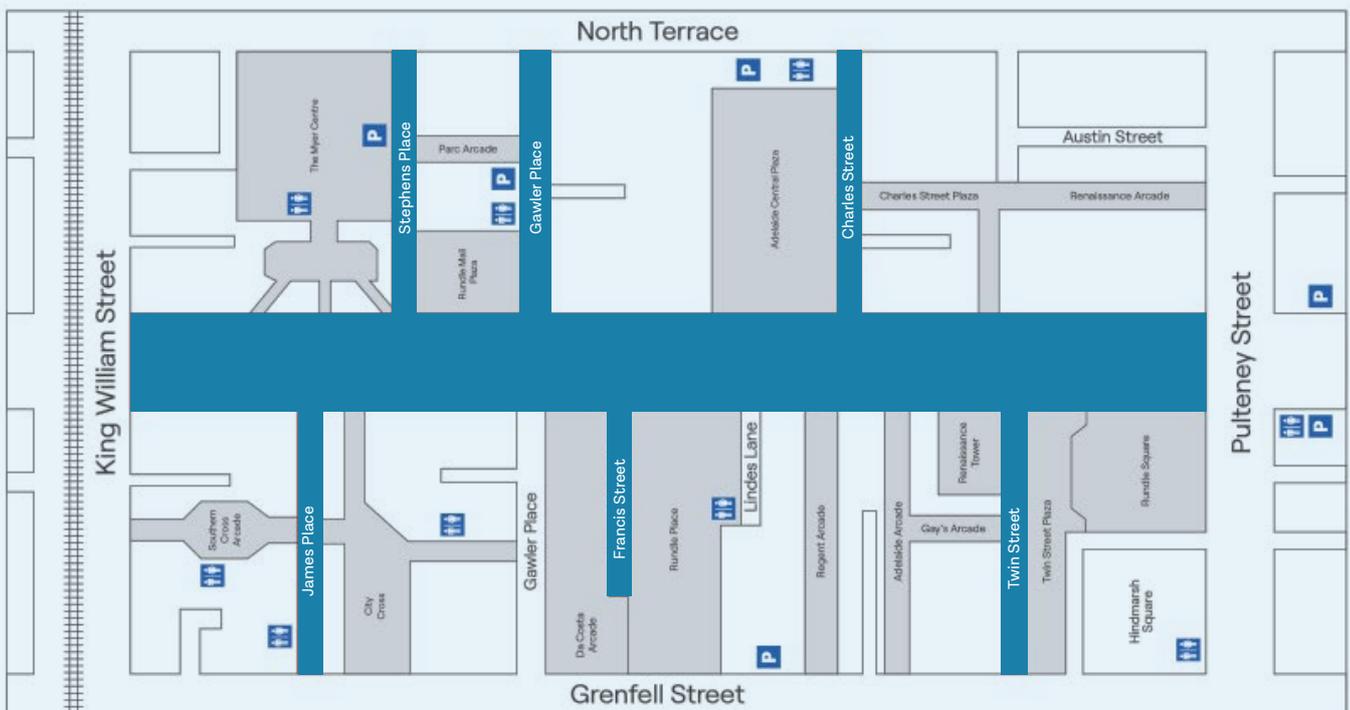
The preliminary morphology analysis of Rundle Mall highlights a key challenge- its dense urban form, with narrow street corridors, expansive rooftops, and limited green infrastructure, intensifies urban heat island effects and drives up energy demand, especially for cooling during summer. These conditions strain building HVAC systems and reduce pedestrian comfort, making climate adaptation urgent.

At the same time, the precinct presents major opportunities for net-zero transformation. With 43% of CBD rooftops technically suitable for solar PV (but only 3% currently used), and strong public transit access plus emerging EV infrastructure, Rundle Mall is well-positioned to lead in renewable energy uptake, urban greening, and integrated retrofit strategies that support the City's 2030 climate strategy.

FURTHER INFORMATION

[Rundle Mall Website](#)

■ Roaming areas



Support for other Case Studies that are part of RACEfor2030's Pathways to Net Zero Precincts project includes Curtin University; DevelopmentWA; Hesperia; Sustainable Built Environment National Research Centre; Hawaiian; Western Power; The Department of Transport and Planning, Victoria State Government; The Centre for New Energy Technologies (C4NET)

Curtin's support includes the CISCO Curtin Centre for Future Networks