Department of Infrastructure, Planning and Logistics

Land use planning and development in a changing climate

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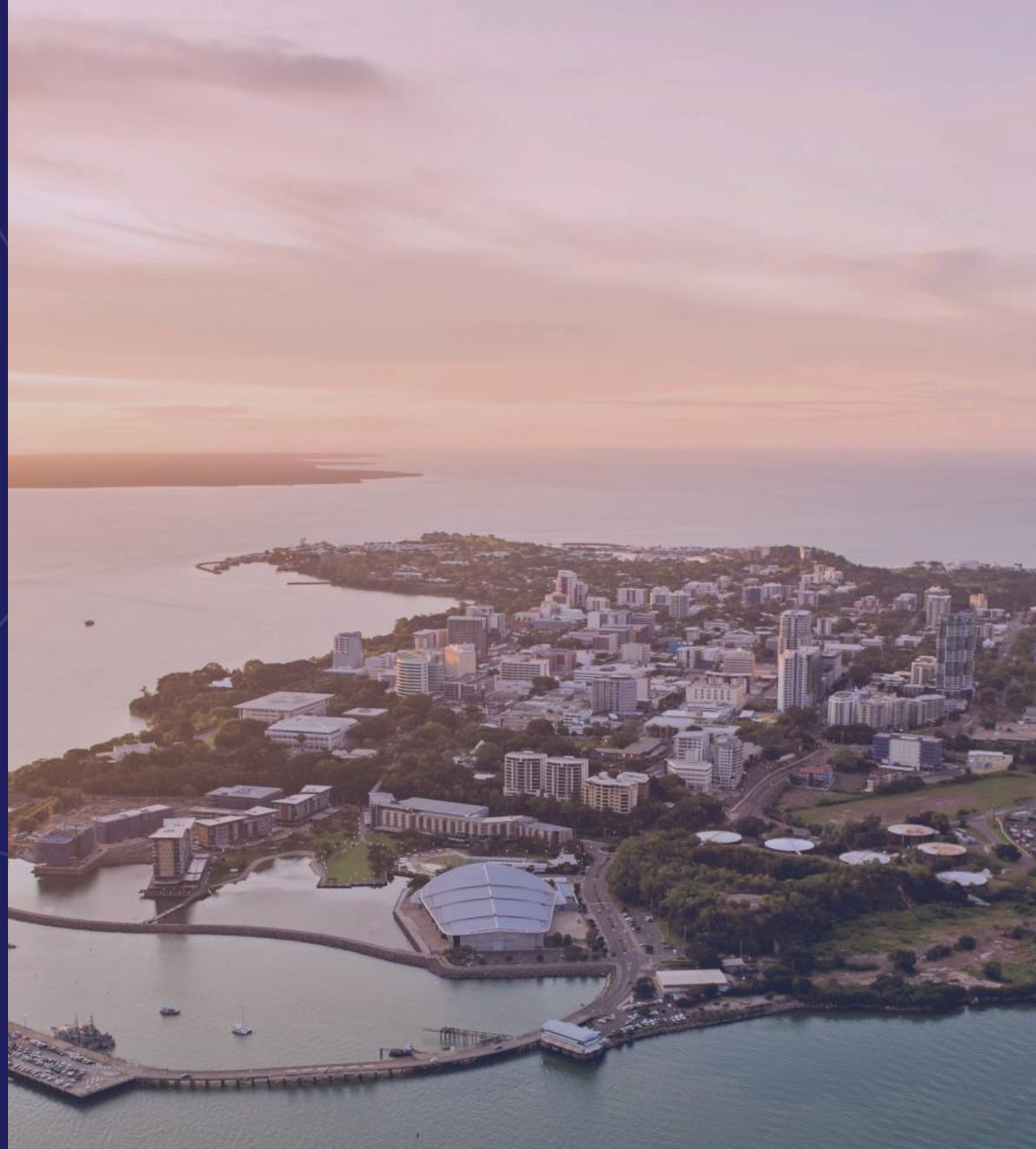
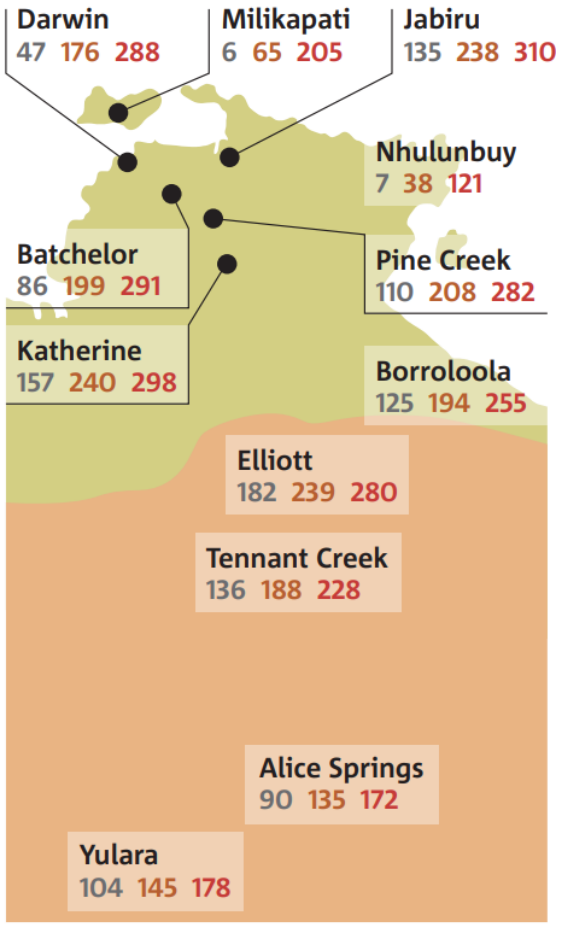
NORTHERN TERRITORY GOVERNMENT



The Northern Territory's climate is changing



The Northern Territory will continue to get warmer.

The hottest days in the Northern Territory will be hotter and more frequent, and warm spells will be longer.

Mean sea level will continue to rise and the height of extreme sea levels will increase.

Many aspects of Territory life are already being impacted by a changing climate. Identifying and understanding these impacts is critical for planning for the future.

NT State of the Science and Climate Change Impacts Report 2020

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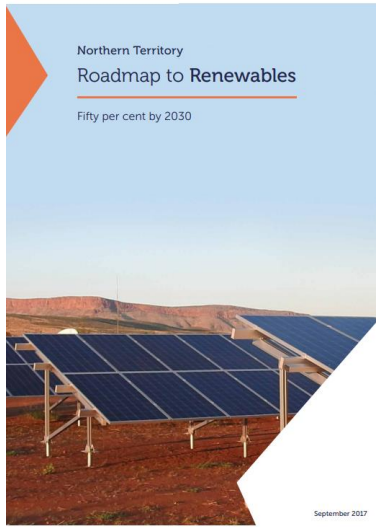
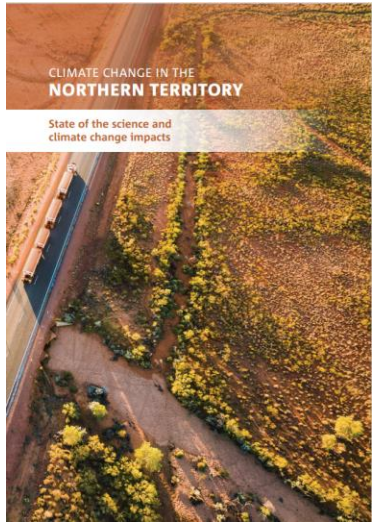
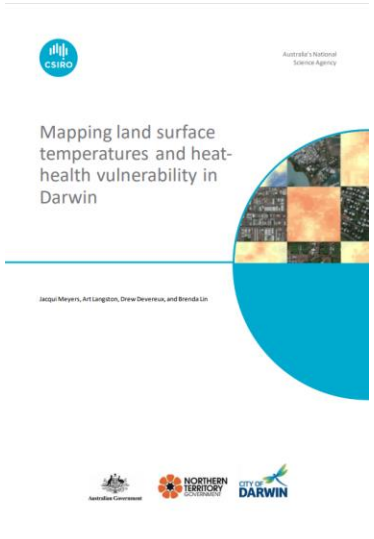
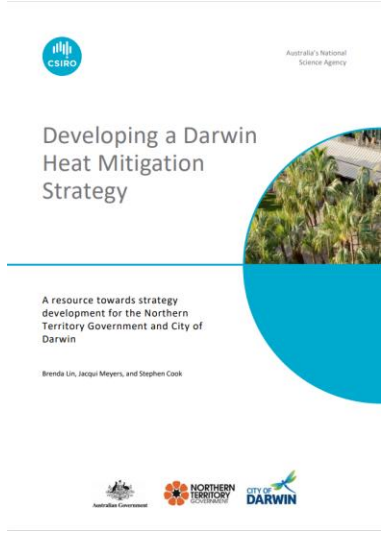
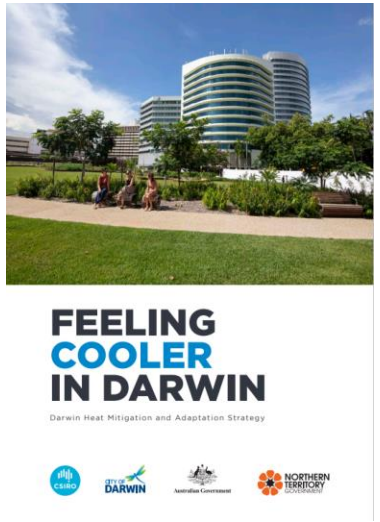
Responses to climate change











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Responding to increasing temperatures and heat extremes

"The 20-year-old tradesman who's got no family history of this but he's had three kidney stones. This poor man is just daily, chronically dehydrated"

"You see more and more kids who are fainting during their recess breaks."

"You see these new recruits in Defence who are having syncopal [fainting] episodes."

Climate is warmer but this workplace is cooler and greener, thanks to its staff
ABC Radio Darwin By Conor Byrne

Some benefits of mitigating and adapting to heat in Darwin. Source: Feeling cooler in Darwin - Darwin Heat Mitigation and Adaptation Strategy

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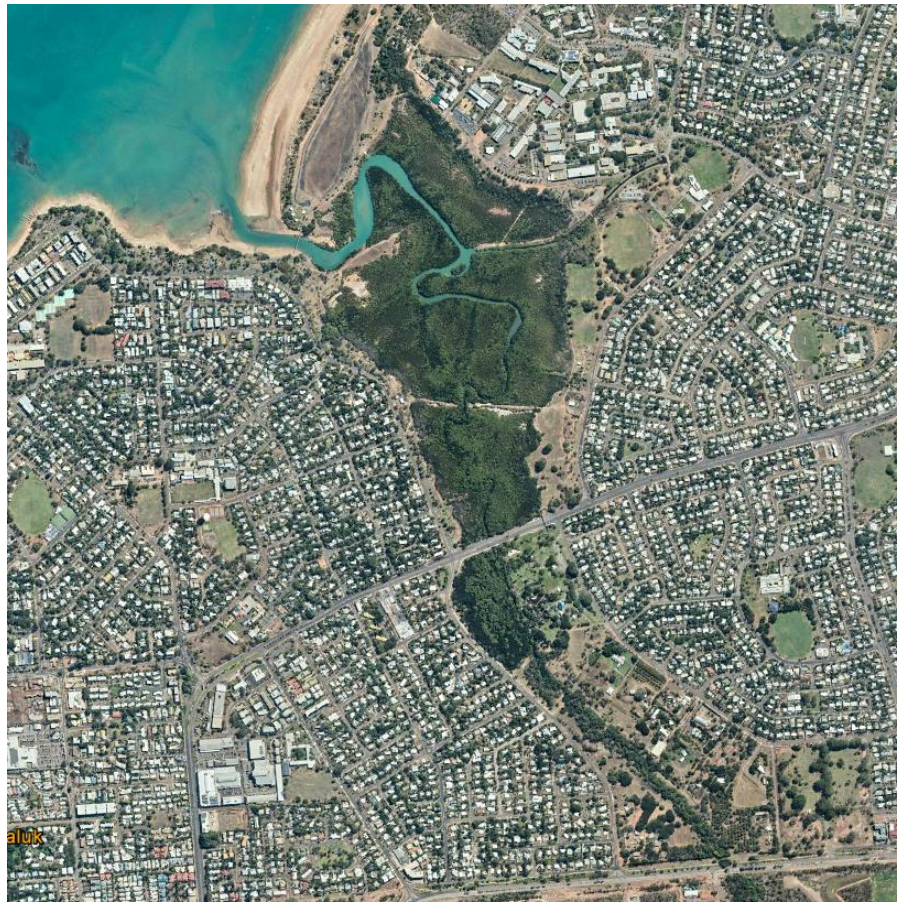
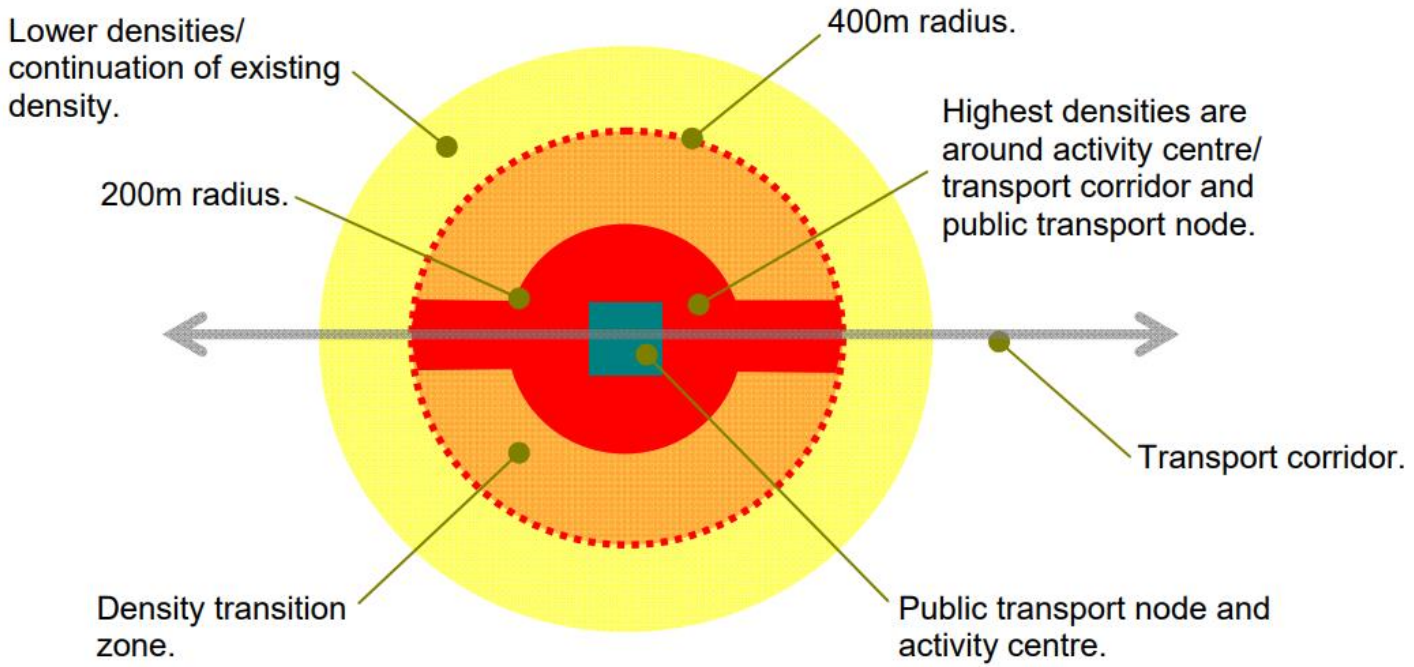
Flooding and Storm Surge



Storm surge associated with Rapid Creek

Reducing Greenhouse Gas Emissions

Compact Urban Growth Policy



Goal: Compact, mixed use settlements reduce impacts of travel.

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Reducing Greenhouse Gas Emissions

Introduction of End of Trip Facilities

Goal: Land use planning supports and enables sustainable transport choices.

Reducing Emissions and Cooling

Reduction of car parking requirements in Zone CB Central Business - Darwin

The typical road space required by three modes of transport– bus, bicycle and car – to transport 69 people. Image: Walking, Riding and access to Public Transport: Draft Report 2012. Australian Government.

Illura Apartments in West Melbourne Image, Fytogreen

Goal: Land use planning supports sustainable transport choices and helps grow the urban forest.

Zone CB (Central Business)

Zone C (Commercial)

Zone MR (Medium Density Residential)

Zone HR (High Density Residential)

Planning for heat mitigation

Shading of Carparks - Zone CB and C

Mapping land surface temperatures and heat-health vulnerability in Darwin

Shade sails and other built structures create cooler microclimates by reducing the amount of solar radiation reaching street level.

Feeling cooler in Darwin - Darwin Heat Mitigation and Adaptation Strategy

Goal: Land use planning helps reduce the heat island effect.

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Adapting to Climate

Designing Better Proposed Provisions - Zone MR and HR

Roof Setbacks:

- **Existing:** 6.6 m to primary street
- **Proposed:** 2.1 metres to primary street

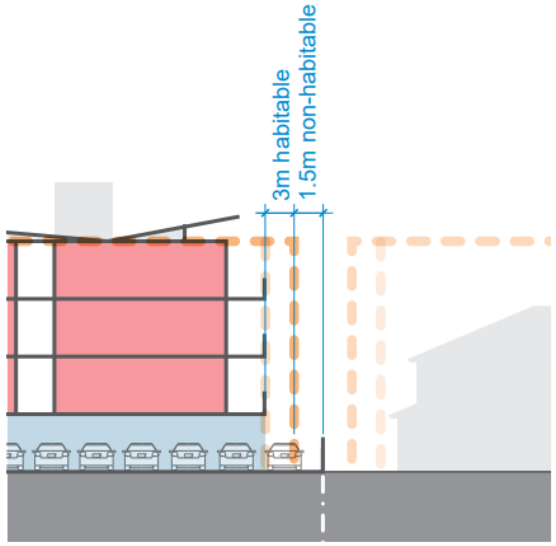
Front Setback Balcony Projections:

- **Existing**: 7.5 metres to both building and balcony
- **Proposed:** 3 metres to balcony and 6 metres to building line

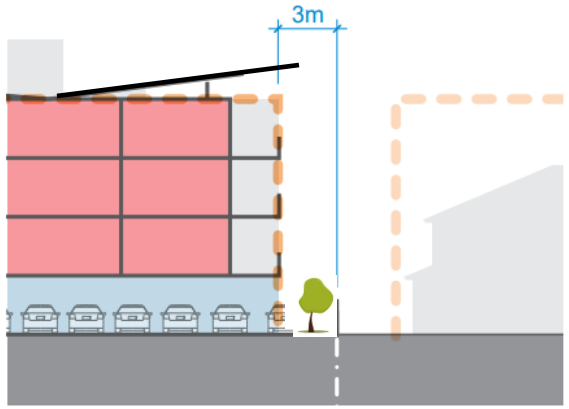
Goal: Land use planning improves the passive comfort of buildings.

Adapting to Climate

Designing Better Proposed Provisions - Zone MR and HR



Existing typical side and rear setback condition.



Proposed typical side and rear setback condition.

Side and Rear Building Setbacks:

- **Existing**: 1.5 to 3 metres
- **Proposed:** 3 metres

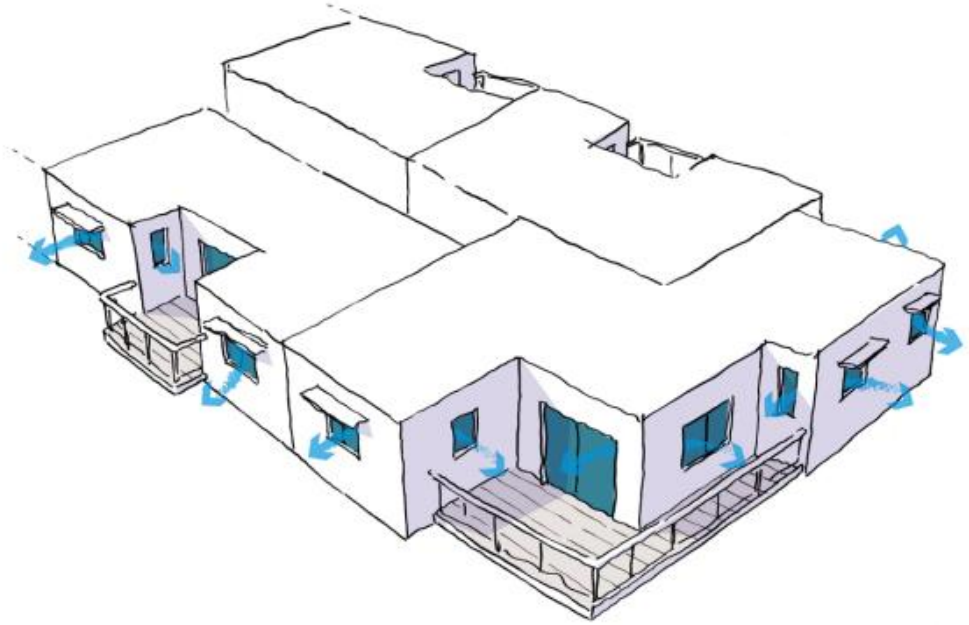
+

2 metre wide **planting** within all side and rear setbacks (no car parking to boundary).

Goal: Land use planning improves the passive comfort of buildings.

Adapting to Climate

Designing Better Proposed Provisions



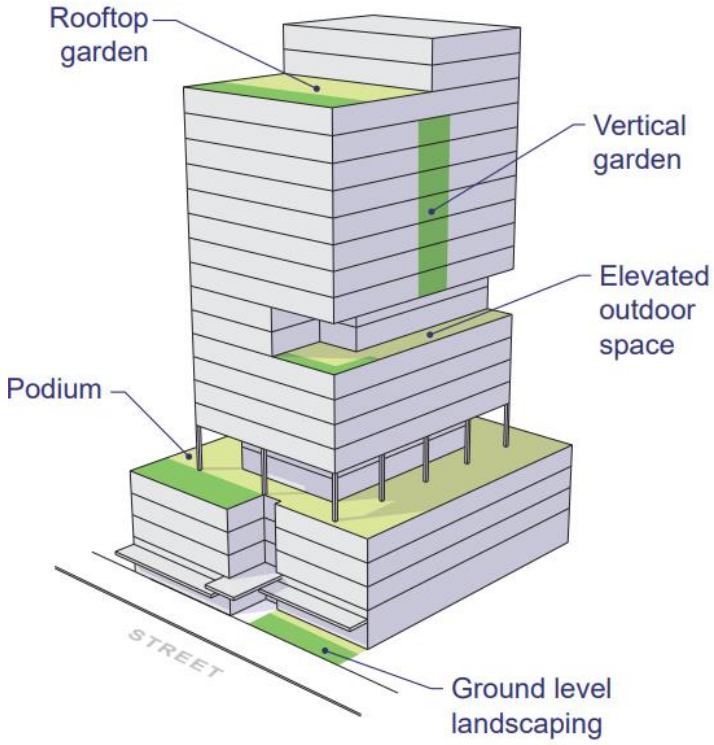
Articulation:

- All residential buildings (excluding single dwellings) to provide a minimum 1m x 1m step in the building line every 15 metres.

Goal: Land use planning improves the passive comfort of buildings.

Greening

Designing Better Proposed Provisions



- **Zone CB:** 10% of site to provide planting.

Goal: Land use planning helps grow the urban forest.

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Planning for Future Resilience

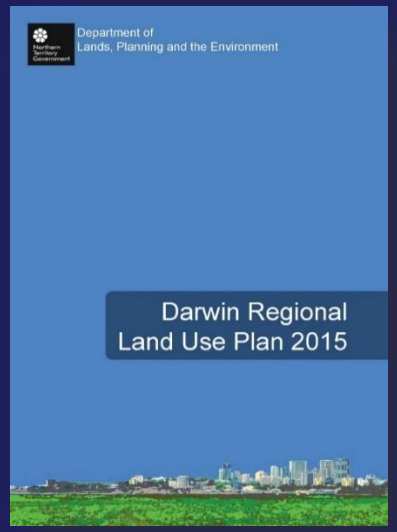
Future Work, Policy and Guidelines

Developing the strategic framework

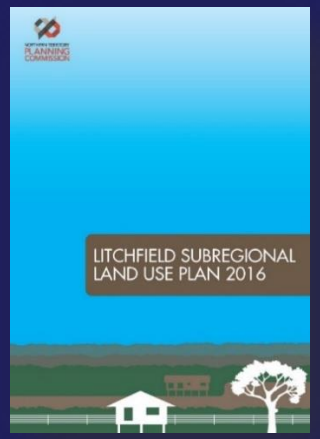
Strategic Planning Policies:
- *"Strategic Directions Planning Policy"*
- Compact Urban Growth Policy

Strategic Land Use Plans

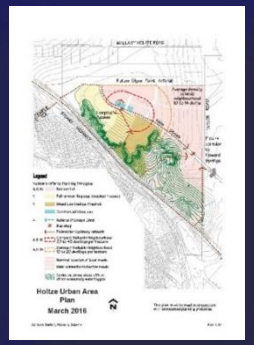
Regional Land Use Plans



Sub Regional Land Use Plans



Area Plans



Interpreting the strategic framework