

# AUDRC Research Note

## Accounting for carbon in the planning of residential neighbourhoods



## *How do we build low-carbon neighbourhoods?*

### Background

- There is a need to understand how structure planning processes for new residential neighbourhoods can best contribute to reducing greenhouse gas emissions. This should consider how accounting for emissions can be accomplished at the planning stage and followed through to the implementation and delivery stages.
- Western Australia's State Planning Policy (SPP 7.2) includes a requirement for precinct structure planning to consider greenhouse gas emissions reduction and incorporation of renewable energy sources and the preparation of an Energy and Greenhouse Gas Emissions Statement.
- This research will support meeting this requirement by providing an evidence base and tools to support better decision-making and assessment in the planning and design of new neighbourhoods.
- This project is of considerable significance as the impact of poor planning of new residential areas significantly contributes to greenhouse gas emissions. This research will provide an evidence base and tools to support better decision-making and assessment in the planning and design of new neighbourhoods.
- Partner organisations are the University of Western Australia, the Planning and Transport Research Centre (PATREC), the Department of Transport Western Australia and the Department of Planning Lands and Heritage.

### Objectives

- Examine how the design of new greenfield and existing densifying neighbourhoods can reduce carbon emissions and contribute to the creation of low or zero-carbon neighbourhoods.
- Identify the primary contributors to greenhouse gas emissions in neighbourhoods and how emissions can be reduced through the planning and design of road networks, open space systems, residential densities, building types, subdivision patterns and environmental conditions.
- Determine how the modelling and reporting of emissions would occur at the district and local structure plan stages and how these could be followed through to implementation.
- Establish key indicators and assessment methodology applicable at the district and local structure planning stages for residential areas.

### Contact

For further information, publications, media, and presentation opportunities, please get in touch with Bill Grace at [bill.grace@uwa.edu.au](mailto:bill.grace@uwa.edu.au).