

Integration of technology and citizen science for conservation

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Wildlife Conservation Lead

We acknowledge the Wurundjeri Woi-wurrung and Bunurong peoples of the Kulin Nation and the Kabi Kabi and Jinibara Peoples of the Sunshine Coast.



TurtleCare Sunshine Coast



Community influencing Policy



Marine Turtle Conservation Plan – 2023

Developed by Council, Community and Kabi Kabi First Nations Peoples.

Guided by a Technical Advisory Panel.

Environment and Liveability Strategy

The ELS outlines key policy positions to protect native fauna and dark skies. including:

1.1 The distinctive and diverse landscape is preserved to maintain the beauty of the area:

e) Dark skies are recognised, protected and celebrated.

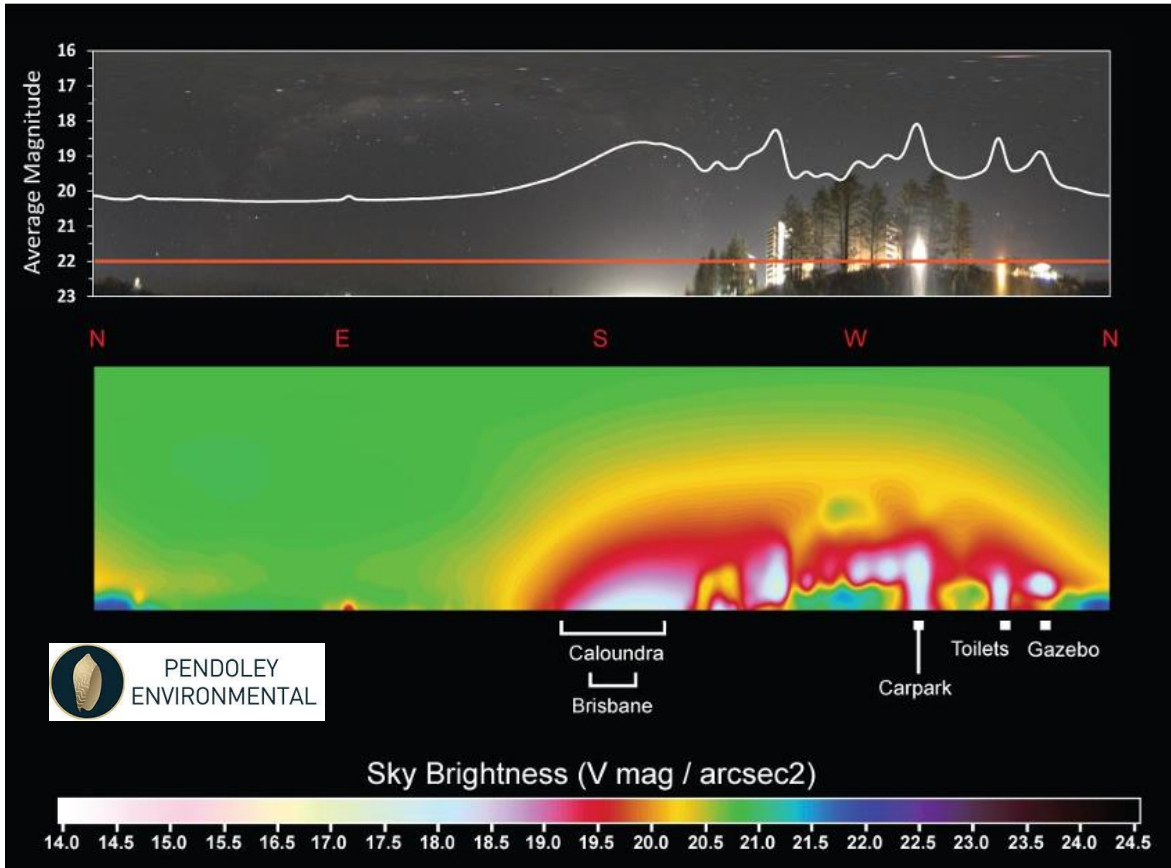
2.1 Natural ecosystems and the native plants and animals they support are preserved:

a) Habitat areas are ecologically functional and well-connected.

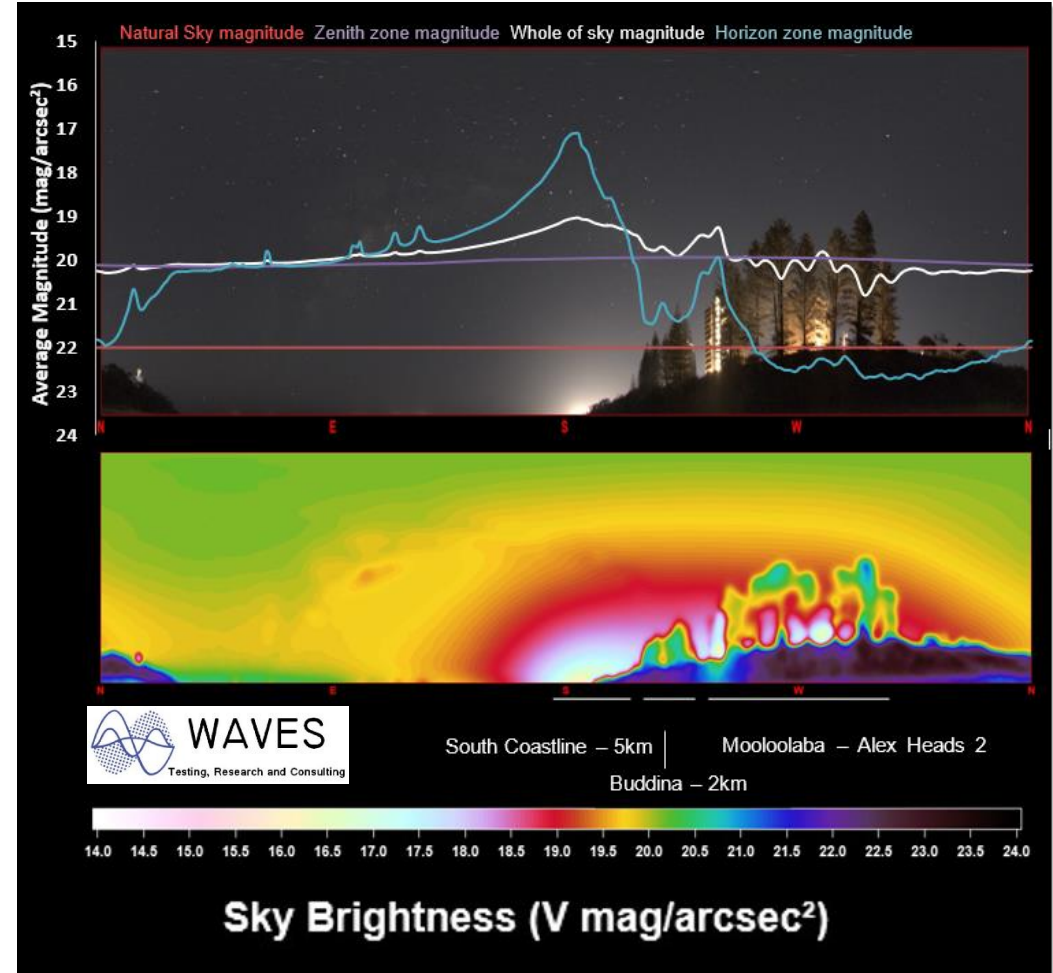
c) Viable populations of native plants and animals are maintained.

Artificial Light at Night Survey

2017



2022







Australian Government

Department of Climate Change, Energy,
the Environment and Water

Shelly Beach Case Study

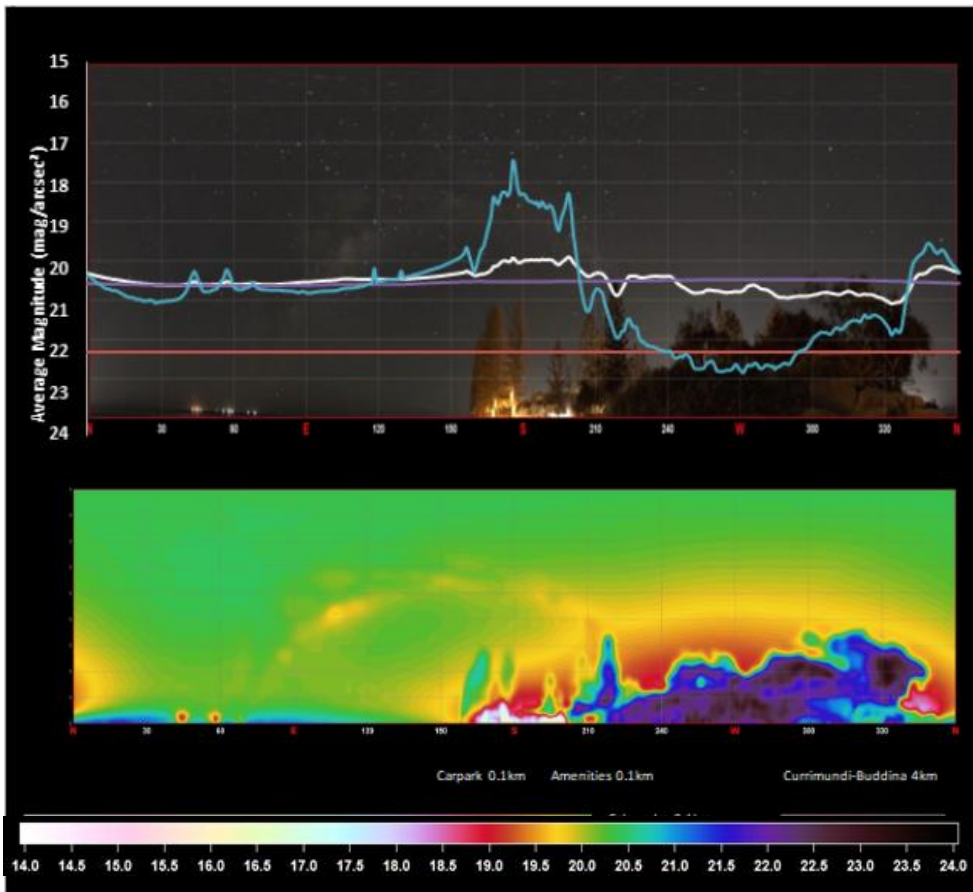




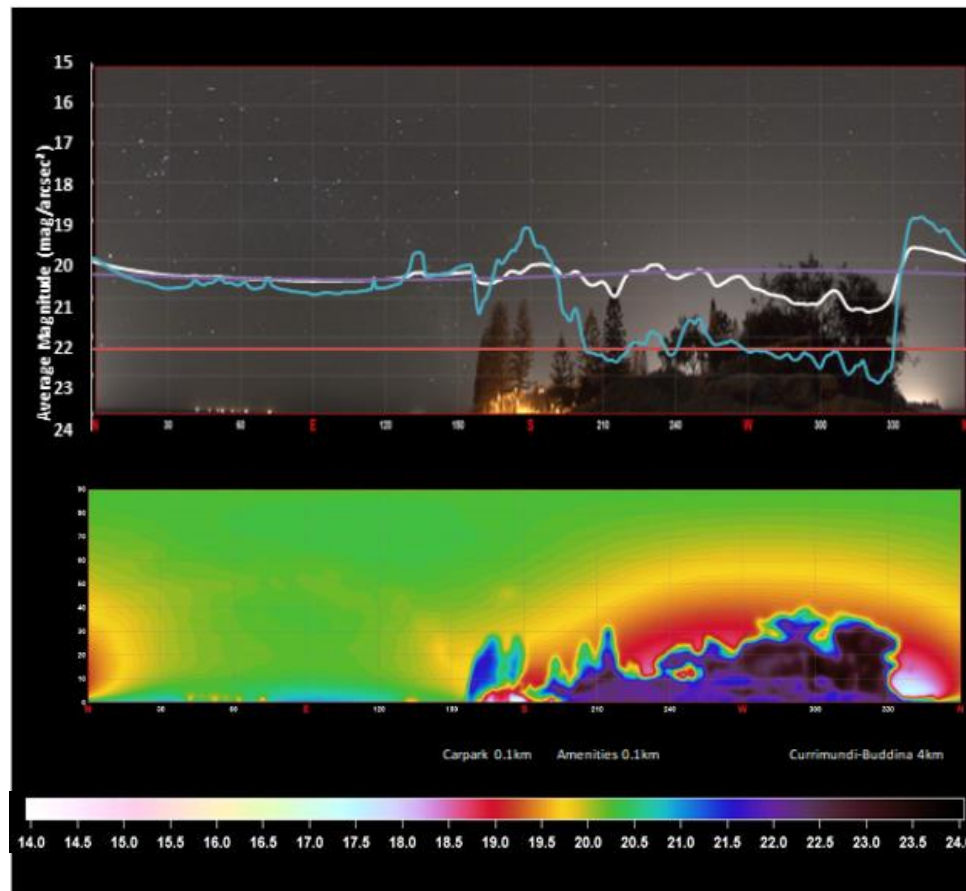
Australian Government

Department of Climate Change, Energy, the Environment and Water

Shelly Beach Case Study



May 2024



Nov 2024

Sky Brightness (V mag/arcsec²)

Planning Scheme Development

Strongest policy instrument available to a local government



State Government

Queensland Model Code (voluntary)

Local Government

Planning Scheme

- Code (*What*)
- Policy (*How*)
- Overlay (*Where*)

Confidential until released for community engagement – anticipated late 2025

Community Behavior Change

Evaluating the response to motion activated turtle-centric lighting at two nesting beaches



- Using the Hierarchy of Effects Model, the study found that residents' awareness of the initiative increased significantly post-exposure. At the same time, their physical activity (e.g., walking on the beach) was not disrupted.
- Community is more aware of initiative, and supports the changed lighting and turtle conservation
- No significant change in perception of safety. No reported incidences during the trial period
- The campaign failed to influence social norms, attitude and preference, but changes were in desirable direction
- Stronger dose of communication intervention and behaviour change strategies will be required to influence the community



Hierarchy of Effects Model (Lavidge & Steiner, 1961).

Co-design outcomes



BRIGHT IDEAS FOR DARK SKIES!

Simple steps to reduce light pollution and protect marine life.

1. Shield your outdoor lighting from the sky and beach.
2. During nesting season, turn your lights off or close your blinds at 8 pm.
3. Spread the word about the importance of dark skies for turtle conservation.



Supported by the Department of Climate Change, Energy, the Environment and Water, Australian Government. In partnership with Sunshine Coast Council and Social Marketing @ Griffith.




STARS AND TURTLES: A PERFECT MATCH!

Protect our wildlife and enjoy the night sky.

1. Switch off unnecessary lights after 8 pm.
2. Use warm white bulbs for inside and amber bulbs outside
3. Join 'Friends of TurtleCare' to learn more about light pollution.



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Next Steps

- Seek grants for behavior change program implementation – *transition awareness to action*
- Seek further partnerships to scale up the awareness at a State level – *collaborative consistent & clear messaging*
- Develop further design guides / toolkits (Design Guides for architects and designers) – *give decision makers what they need*
- Continued monitoring and data collection (Dark Sky & Sea Turtle Orientation) – *Expand the evidence base*



Thank you to our collaborators and mentors

Ebony King, Simone Bright, Kellie Pendoley, Col Limpus,
Ken Wishaw, Adrian Cupitt, Sameer Deshpande, Bo Pang,
Owen McCormack, Jacqueline Nolen, Cesar San Miguel &

TurtleCare and Coolum and North Shore Coast Care citizen scientists

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