

RESEARCH INITIATIVES IN MINESITE REHABILITATION

*Case studies from the tropics
and sub-tropics of Queensland*

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IMPACTS FROM MINING

- Air quality



IMPACTS FROM MINING

- Water quality





IMPACTS FROM MINING

- Land productivity



REHABILITATION

Objectives:

- To create a landscape that is stable against the erosive forces of wind and water
- To return the land to a condition that allows it to be used in a productive manner



REHABILITATION

Benefits:

- **Reliable and effective means of containing impacts**
- **Regaining of land for other productive forms of land use**
- **Greater efficiency and productivity in overall operation**
- **Investment in long-term future of the company**



REHABILITATION

Planning:

- Definition of post-mining land use(s)
- Selective handling of overburden material and soil
- Landscape design for land use, drainage, erosion control
- Techniques for establishing and maintaining vegetation

RESEARCH ISSUES

- Prevention and minimisation of problems
- Containment/remediation/rehabilitation
- Sustainability and planning for closure



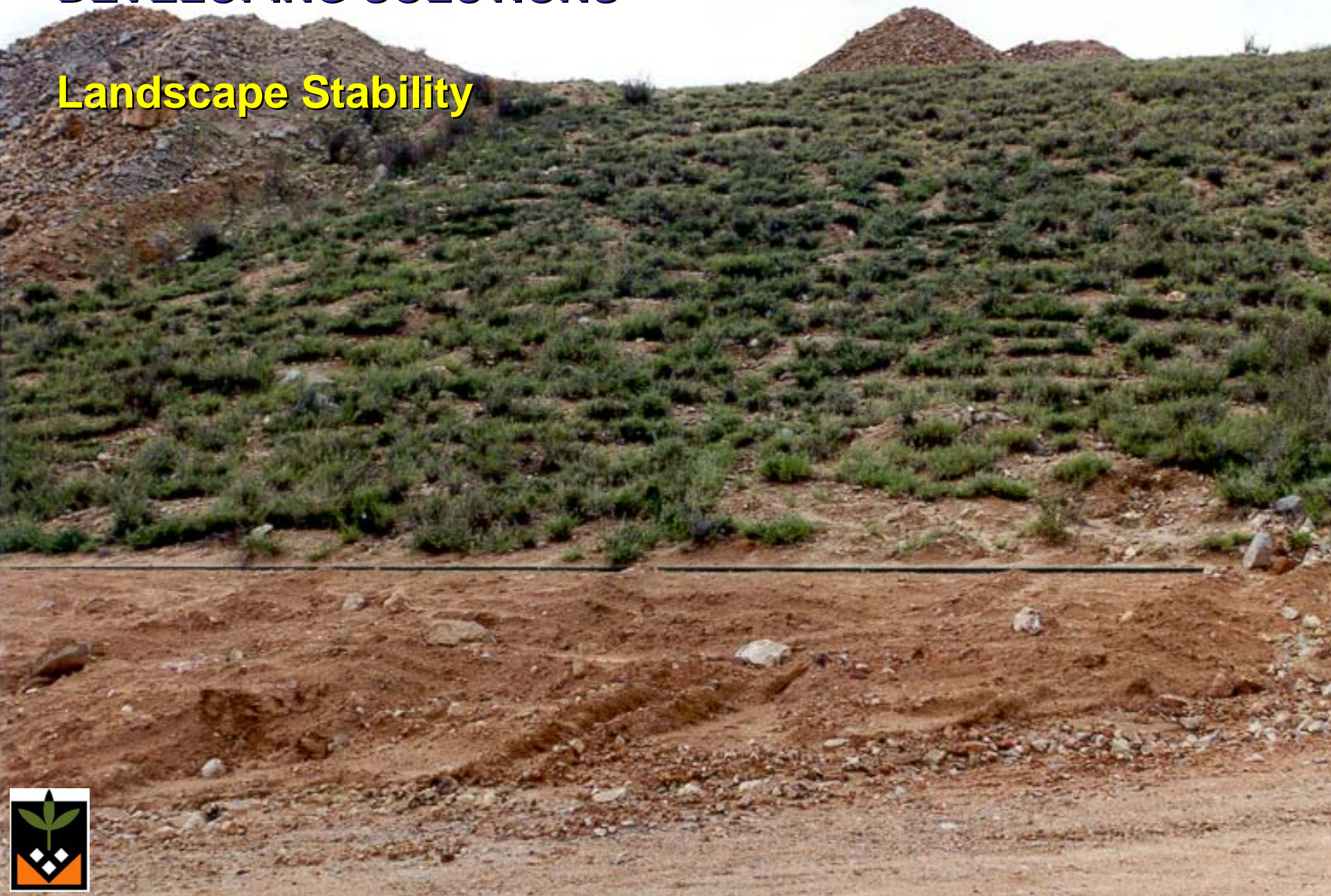
DEVELOPING SOLUTIONS

Landscape Stability



DEVELOPING SOLUTIONS

Landscape Stability

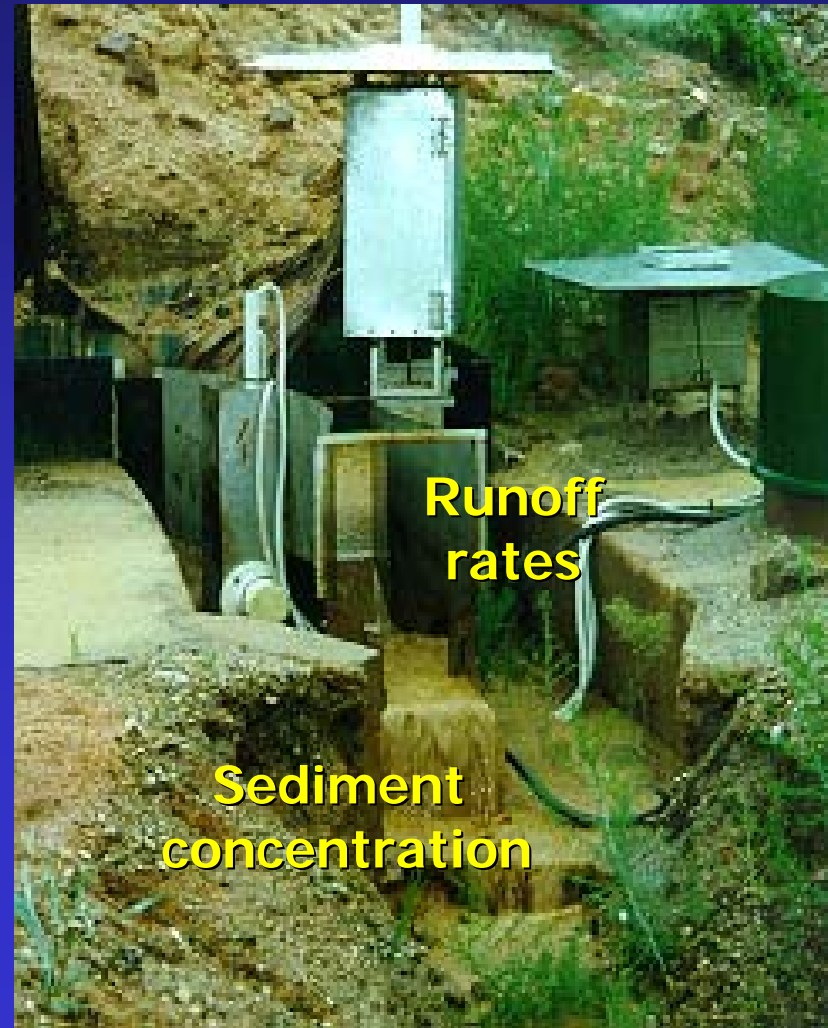
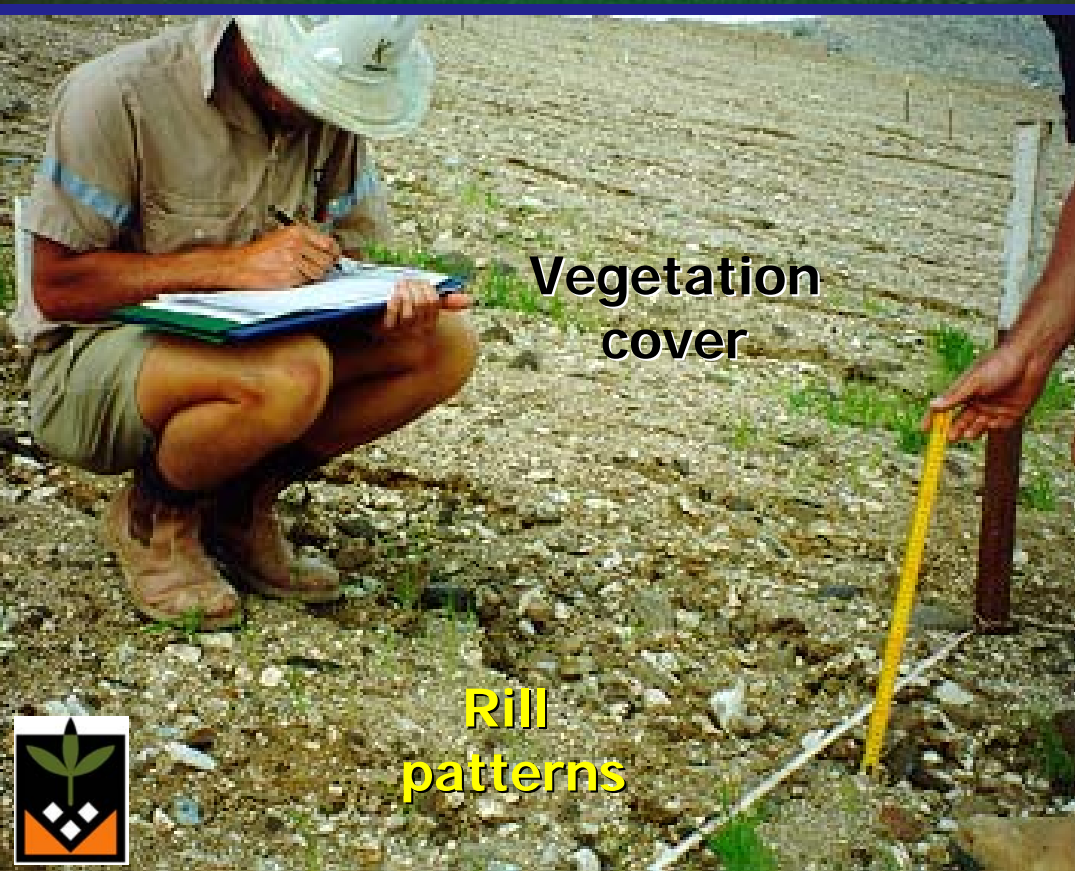




20°

37°

Measurements









EROSION RESISTANCE
DPI

WARNING
DO NOT OPERATE
ON ANY OTHER
SURFACE
DO NOT OPERATE
ON ANY OTHER
SURFACE



DEVELOPING SOLUTIONS

Ecosystem Stability



DEVELOPING SOLUTIONS

Ecosystem Stability











A photograph of a person standing in a field of tall, dry grass. The person is wearing a light-colored shirt and a hat. In the background, there are several trees and a clear blue sky. The text "Is it sustainable?" is overlaid at the bottom of the image.

Is it sustainable?









9 8'99















Kidston

Brisbane













19





3/12/98





13 019







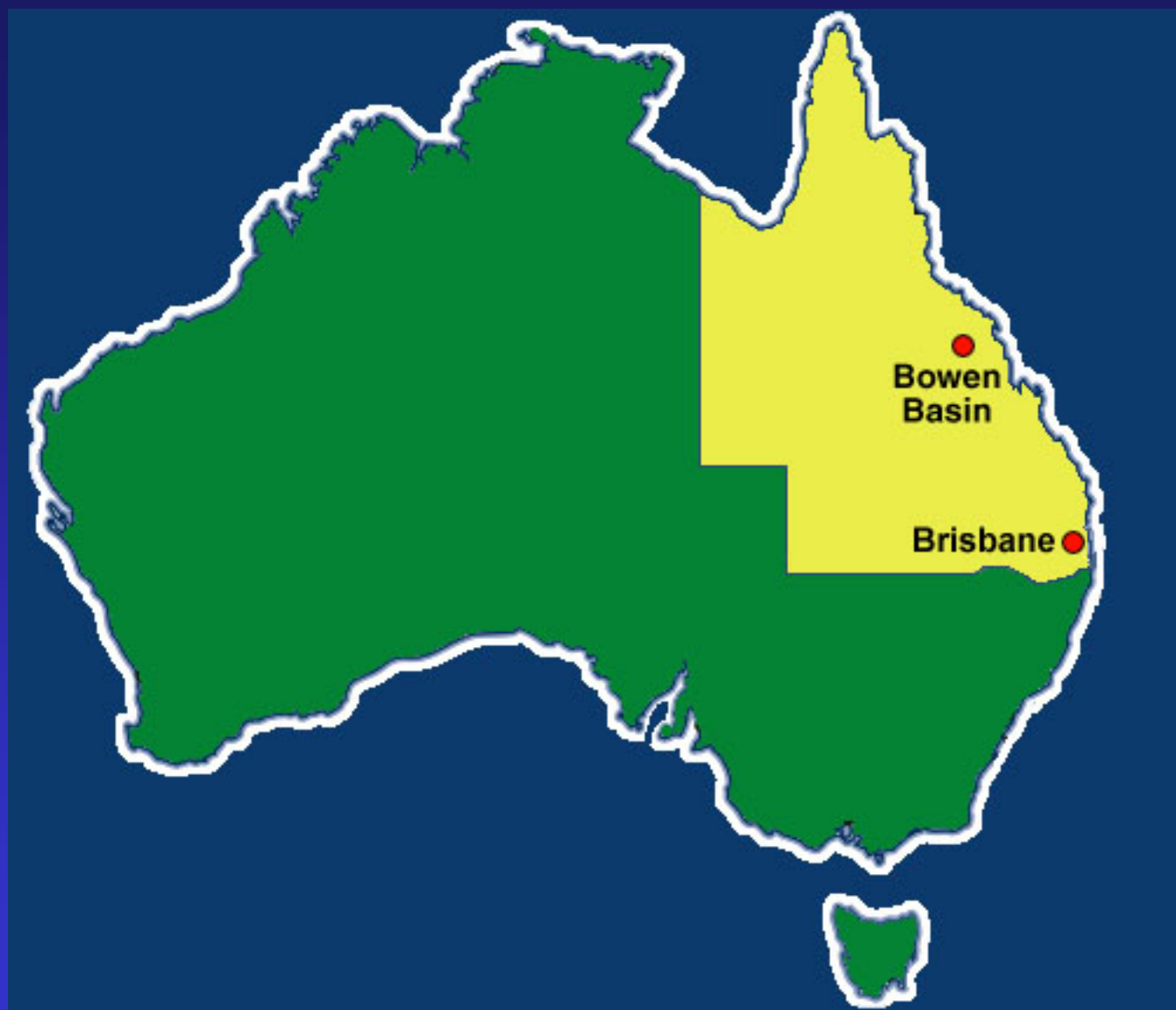












Bowen
Basin

Brisbane









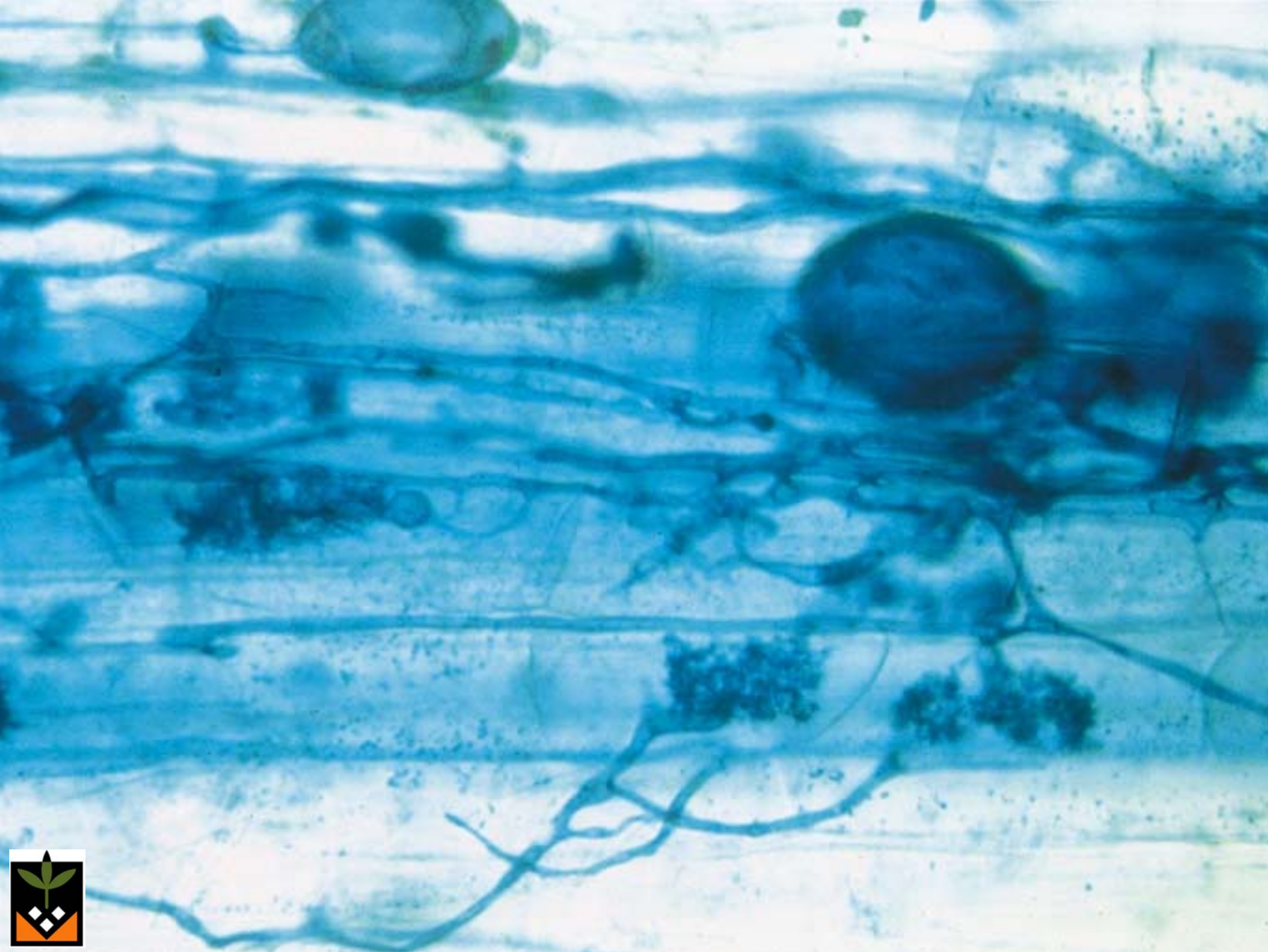




















10.9
10.8
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10.4
10.3
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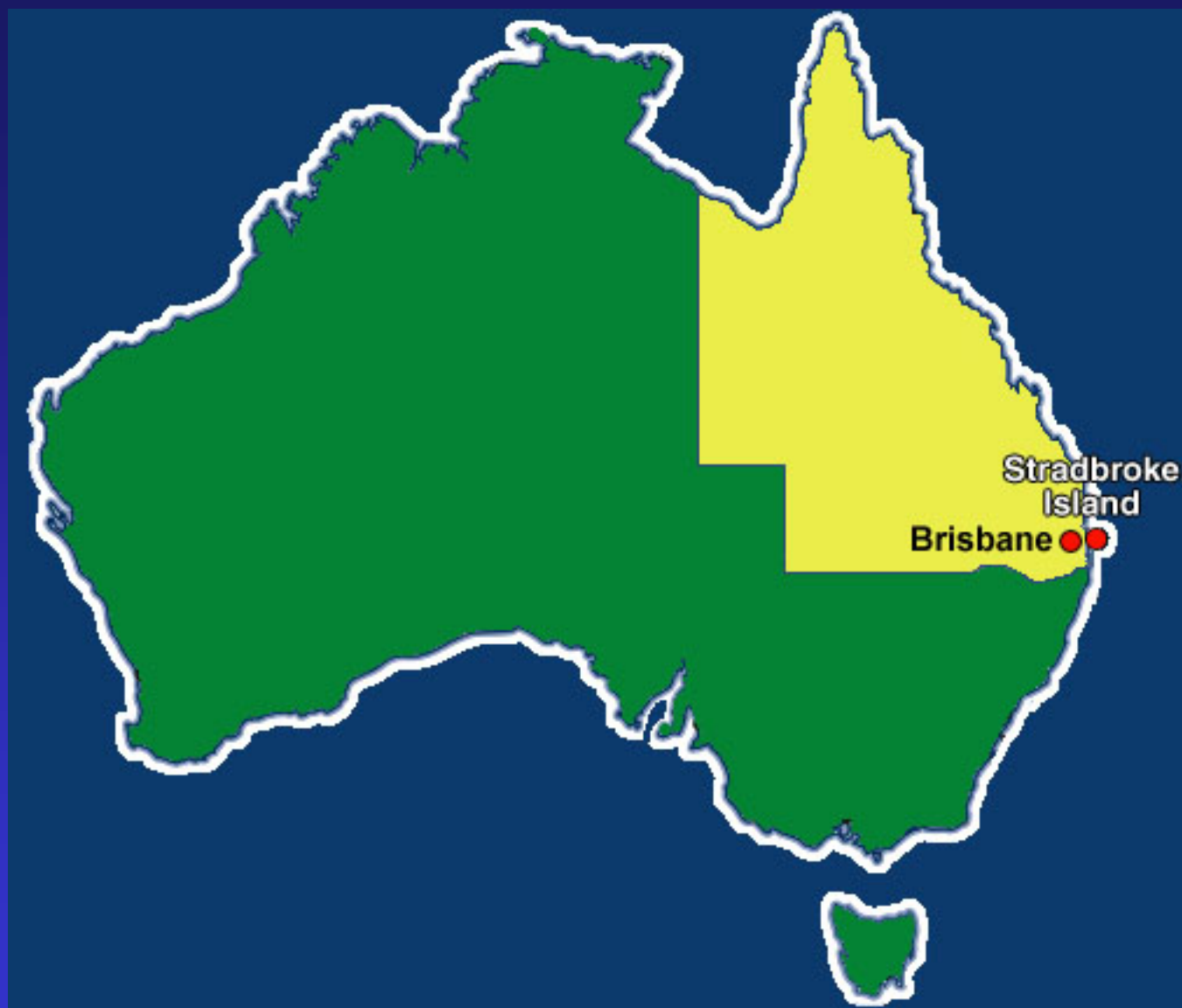


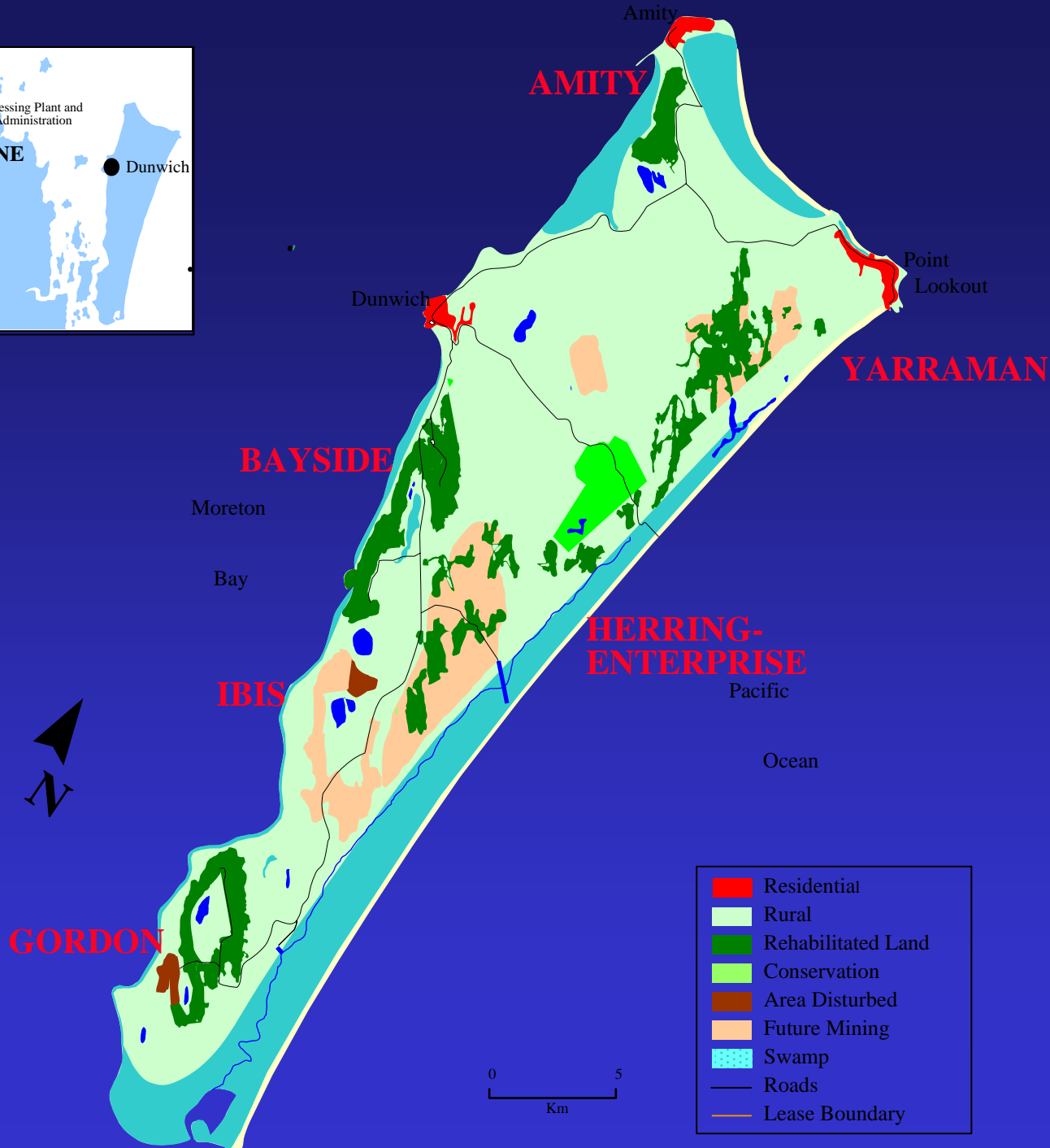














































THE STRATEGY

- **Getting the seedbed right**
to maximise direct-seeding success
- **Getting the species right**
to maximise survival
- **Getting the system sustainable**
to maximise long-term success



**“Before you start,
think of the finish”**



University of Queensland

Contact Details

The Centre for Mined Land Rehabilitation, in association with the Sustainable Minerals Institute at the University of Queensland, is a key provider of environmental and social research and training services to the mining and mineral processing industries throughout Australia and the world.

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