Department of Primary Industries and Regional Development
GOVERNMENT OF WESTERN AUSTRALIA

Rangelands NRM Western Australia

West Kimberley LCDC
Land Conservation District Committee

Australian Government | National Landcare Program

Building waterponds with a road grader

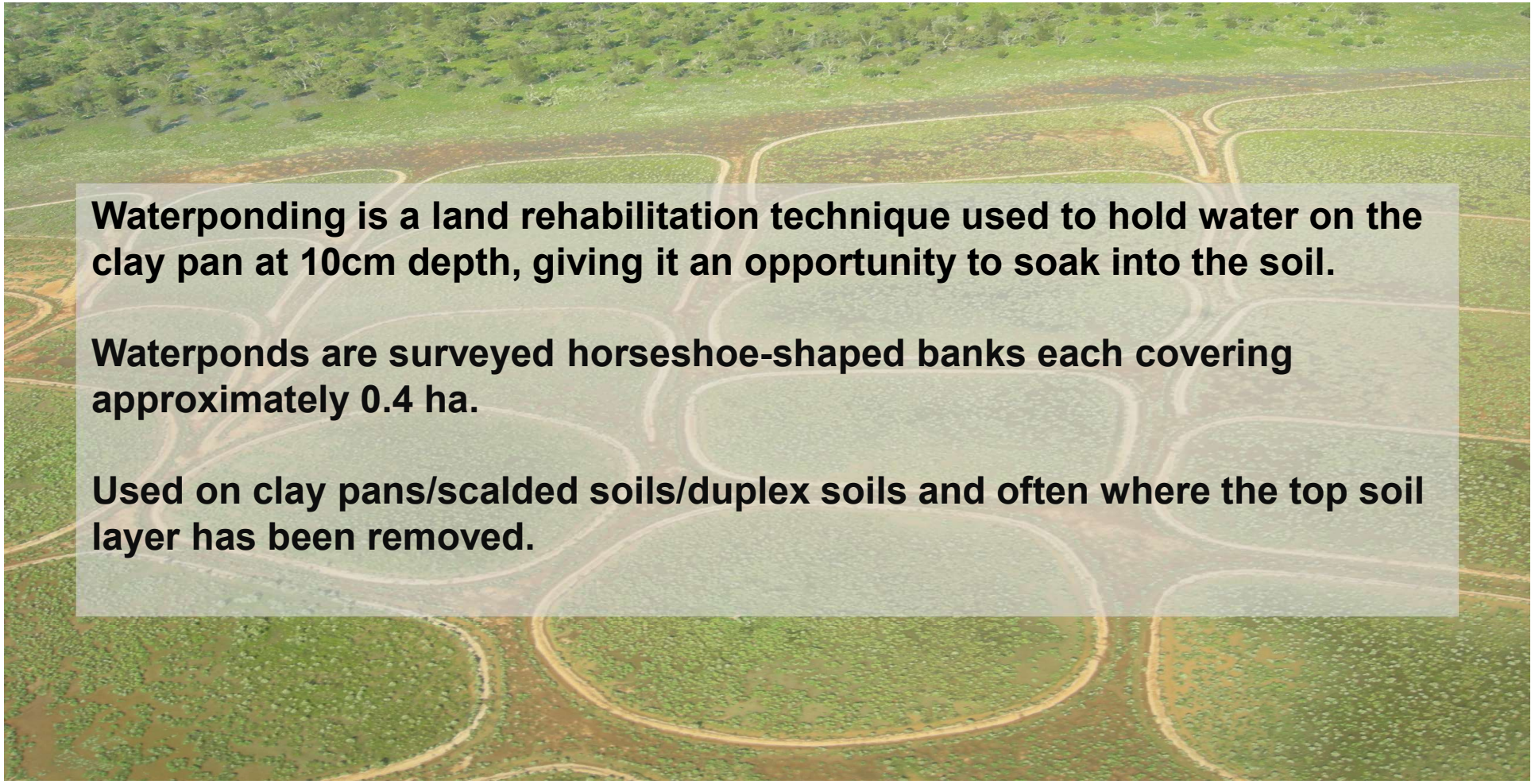
Presenters

Matthew Fletcher, Department of Primary Industries and Regional Development, Kununurra WA

Ray Thompson, Rangeland Rehabilitation, Nyngan NSW

Jardine Macdonald, Rangelands NRM, Broome WA

Waterponding



Waterponding is a land rehabilitation technique used to hold water on the clay pan at 10cm depth, giving it an opportunity to soak into the soil.

Waterponds are surveyed horseshoe-shaped banks each covering approximately 0.4 ha.

Used on clay pans/scalded soils/duplex soils and often where the top soil layer has been removed.

Scalded areas and thick crusts

30 cm of Sandy Loam top soil lost

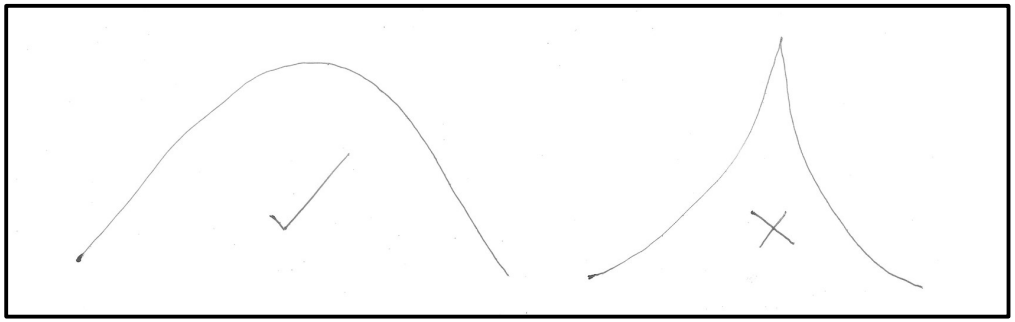
Credit: Rick Ford, Gogo Station (2013 waterponding)

Cracking of soil

Other rehabilitation work

Trialling different graders

It costs approximately $225 to waterpond on hectare.

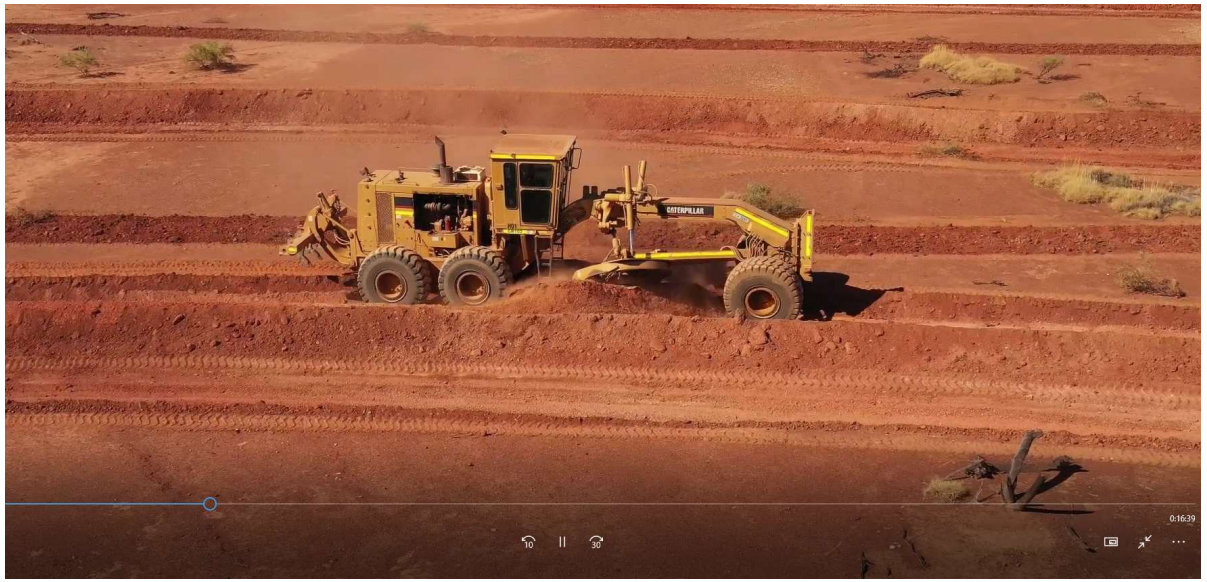


Four steps in a waterponding project

1) Planning

2) Surveying

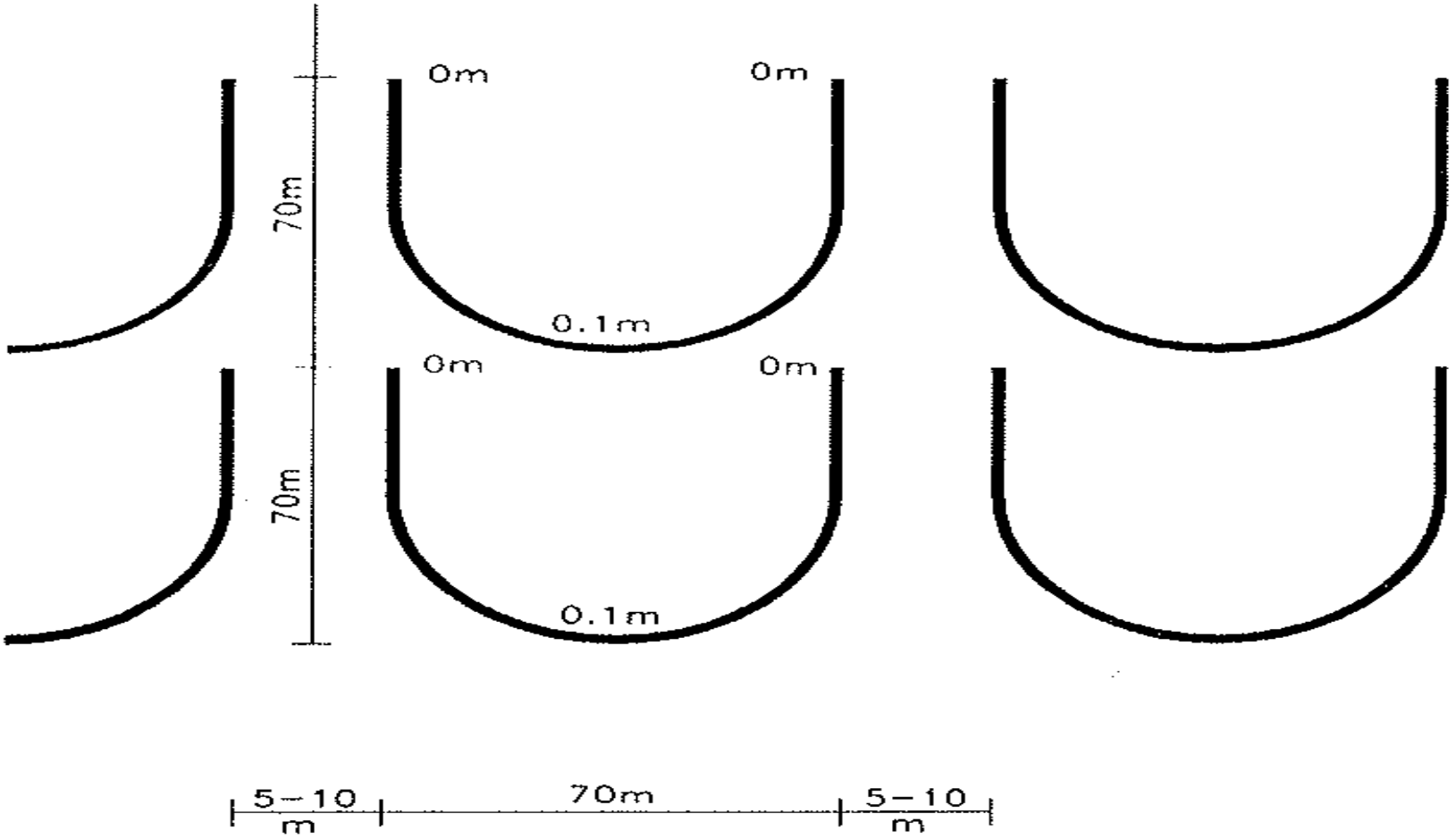
3) Building and



4) Management post construction.

Laser Survey Gear & Tine Marker

Typical Waterponding Configuration



Sloping scald - Horseshoe Waterponds

Flat Scalds – Circle Waterponds

Key points for waterponding construction

- Only want to catch water that falls, not bring in more from above or elsewhere
- Waterponding duplex soils (i.e. soil types, that you pond and soil that you do not pond)
- Slope for waterponding (0.1 – 0.3% or 10 to 30cm in 100m); use water spreading for steeper country up to 3% slope (3m in 100m)
- Seeding ponds at construction time

First Pass following the Survey Line

Seed Boxes & Rippers

Ripping across the Waterpond

Bank Construction, First Pass

Second Pass

Seeding Bank

Third Pass for Construction

Big horse power machines are most efficient

Freeboard on ponding bank

Old Man Saltbush seed germination