

Department for Environment and Heritage

Managing Fire on Conservation Lands in SA: A Regional Approach to Prescribed Burning in Ngarkat Conservation Park

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Department for Environment & Heritage
Murraylands Region.



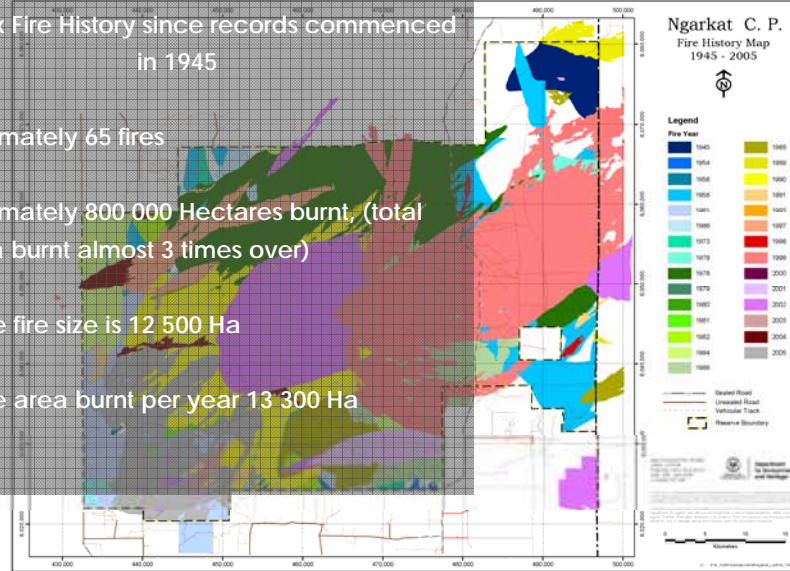
Why is Ngarkat Unique?

- Ngarkat is the largest remnant of native vegetation in settled S.A.
- Fire Management Plan area covers 301 000 hectares comprising Conservation Reserves, adjacent unallotted Crown land and private Heritage Agreements
- Vegetation is dominated by heathland & varying Mallee over-storey
- Not considered Grassland or Woodland
 - (as per McArthur meters)

Why is Ngarkat Unique?

Complex Fire History since records commenced in 1945

- Approximately 65 fires
- Approximately 800 000 Hectares burnt, (total plan area burnt almost 3 times over)
- Average fire size is 12 500 Ha
- Average area burnt per year 13 300 Ha



Why is Ngarkat Unique?

- Inappropriate fire regimes are impacting on Threatened Species including:
 - Mallee Emu wrens (*Stipiturus mallee*)
 - Western Whipbird (*Psophodes nigrogularis leucogaster*)
- The Lowan Phebalium (*Phebalium lowanense*) is nationally threatened, with a large percentage of its population remaining within Ngarkat
- Inappropriate fire regimes will result in local extinction and has other negative impacts on ecosystems



Western Whipbird (*Psophodes nigrogularis leucogaster*), Malleefowl (*Leipoa ocellata*), Mallee Emu-wren (*Stipiturus mallee*) & Inset: Lowan Phebalium (*Phebalium lowanense*). Photos: Graeme Chapman & Luke Geelen.

Why is Ngarkat Unique?

Suppression Difficulty

- Limited access (4WD only)
- Distance and time takes to deliver fire fighting resources
- Dry fire fighting techniques (limited water)
- Minimal success when balanced against the effort expended

Mt. Rescue Fire (SW Ngarkat) January 2005
Photo: CFS

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Previous Fire Management

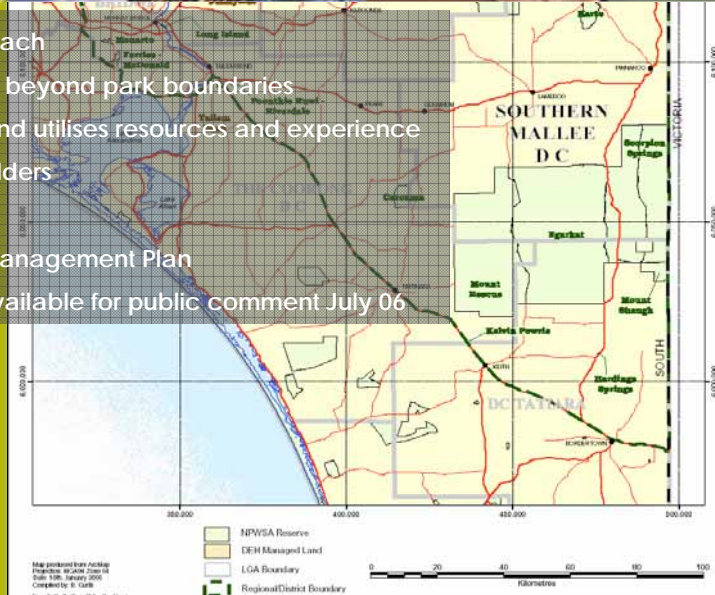
- Reactive Bushfire Suppression
"chase it when it starts"
- Philosophical differences over management
 - Fire Management
 - Incident Management
- Basic Fire Response Plans
- Fire Management Plan never completed

Fire Behaviour Box Flat Strip Burn Dusk: Ngarkat May 2005
Photo: Brett Stephens

Current Fire Management

Landscape approach

- Risk extends beyond park boundaries
- Combines and utilises resources and experience of all stakeholders
- Complete Fire Management Plan
- Draft plan available for public comment July 06



Current Fire Management

- Community / stakeholder engagement
 - CFS, DEH, District Bushfire Prevention Committees, Apiarists, Park neighbours
 - Involved in planning process
 - Represented on management committees (Ngarkat Operations group)
- Joint response Planning
 - CFS (Managing Fire Authority)
 - DEH (Land Managers)
 - Other stakeholders



Ngarkat District FMP Operations Sub-group
Photo: Robert Laver

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Prescribe Burn objectives

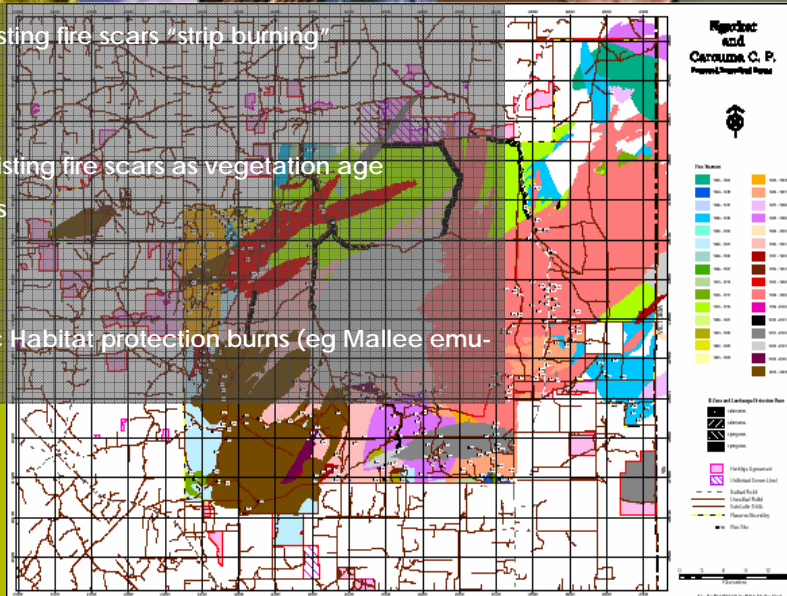
- Protect life, property & environment
- Reduce size, further spread and frequency of bushfires
- Increase probability of quick containment of bushfires
- Provide safety zones during bushfires
- Improve knowledge and appropriate fire regimes
- Protect existing habitat for threatened species

Ngarkat Prescribed Burn
Photo: Brett Stephens

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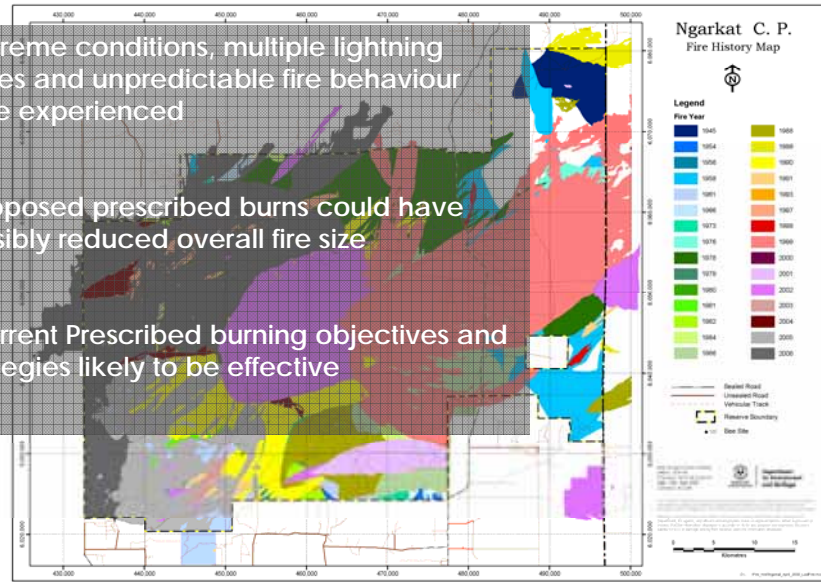
Prescribe Burns Strategies

- Link existing fire scars "strip burning"
- Burn existing fire scars as vegetation age increases
- Specific Habitat protection burns (eg Mallee emu-wren)



January 2006 Fire

- Extreme conditions, multiple lightning strikes and unpredictable fire behaviour were experienced
- Proposed prescribed burns could have possibly reduced overall fire size
- Current Prescribed burning objectives and strategies likely to be effective



Bushfire CRC

Continue Project FuSE

- Fire Behaviour
 - Better understanding will assist improve suppression strategies
- Prescribed Burning Prescriptions
 - Improve Operational efficiencies eg resourcing
 - Informing unbounded burning options
- Develop a Mallee and Heath Fire Danger Meter "Gouldimeter"
- Aerial suppression effectiveness in Mallee and Heath vegetation. Limited ground access and support.
- Quick response of researchers to attend Bushfires and look at "Ngarkat Fire Behaviour in January"

Jim Gould: Project Leader Fire Behaviour Monitoring, Bushfire CRC
Photo: Phillip Strachan

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