

# Infrastructure

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★ Curtin University of Technology

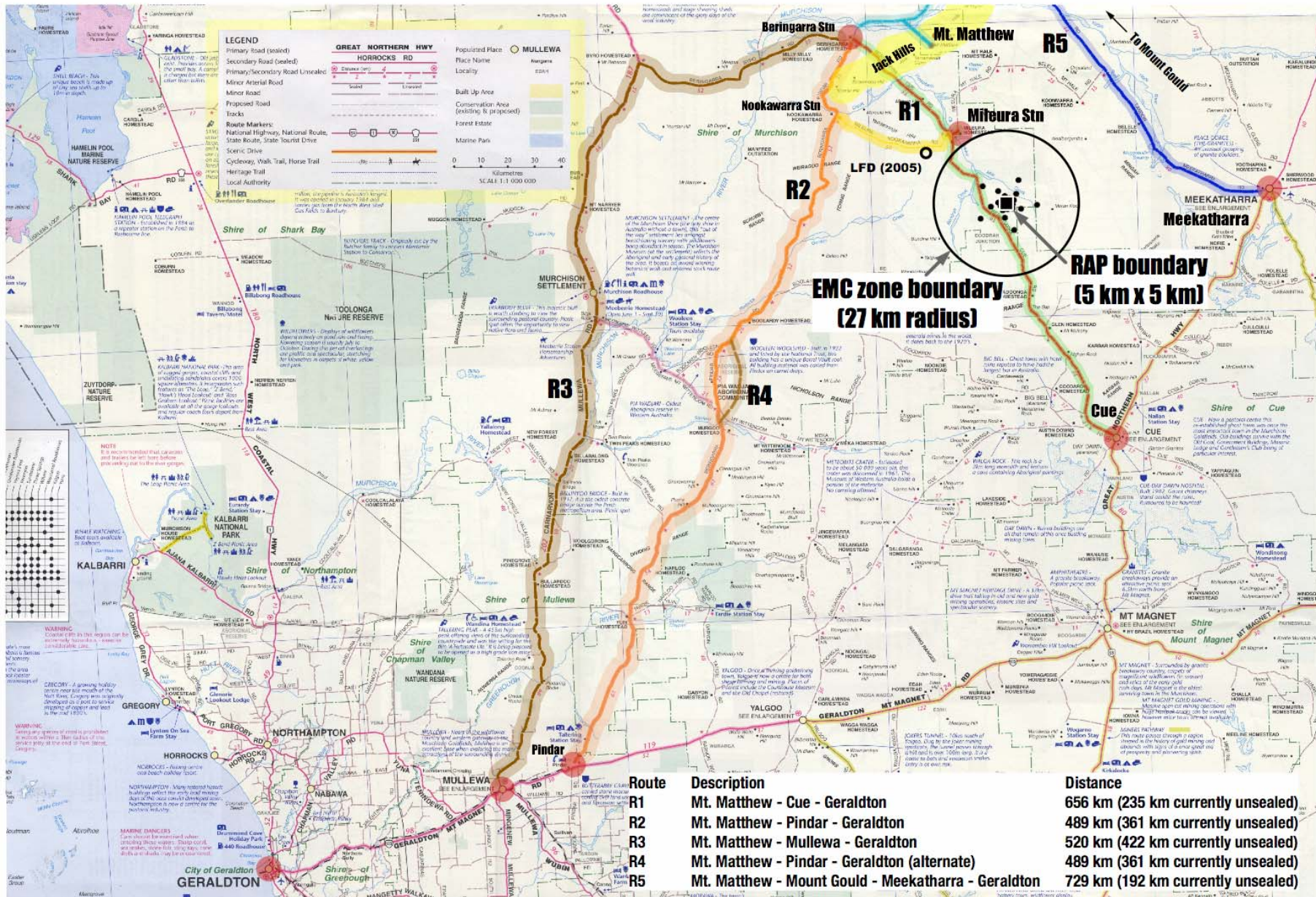
★ Dept of Industry and Resources (DOIR)

# Infrastructure and Support for the LFD / SHI

- ★ Mileura
  - at homestead
  - at LFD field site
  
- ★ Elsewhere
  - Perth eg Workshops?  
Test equipment  
Anechoic / EMC ?

# Infrastructure Issues

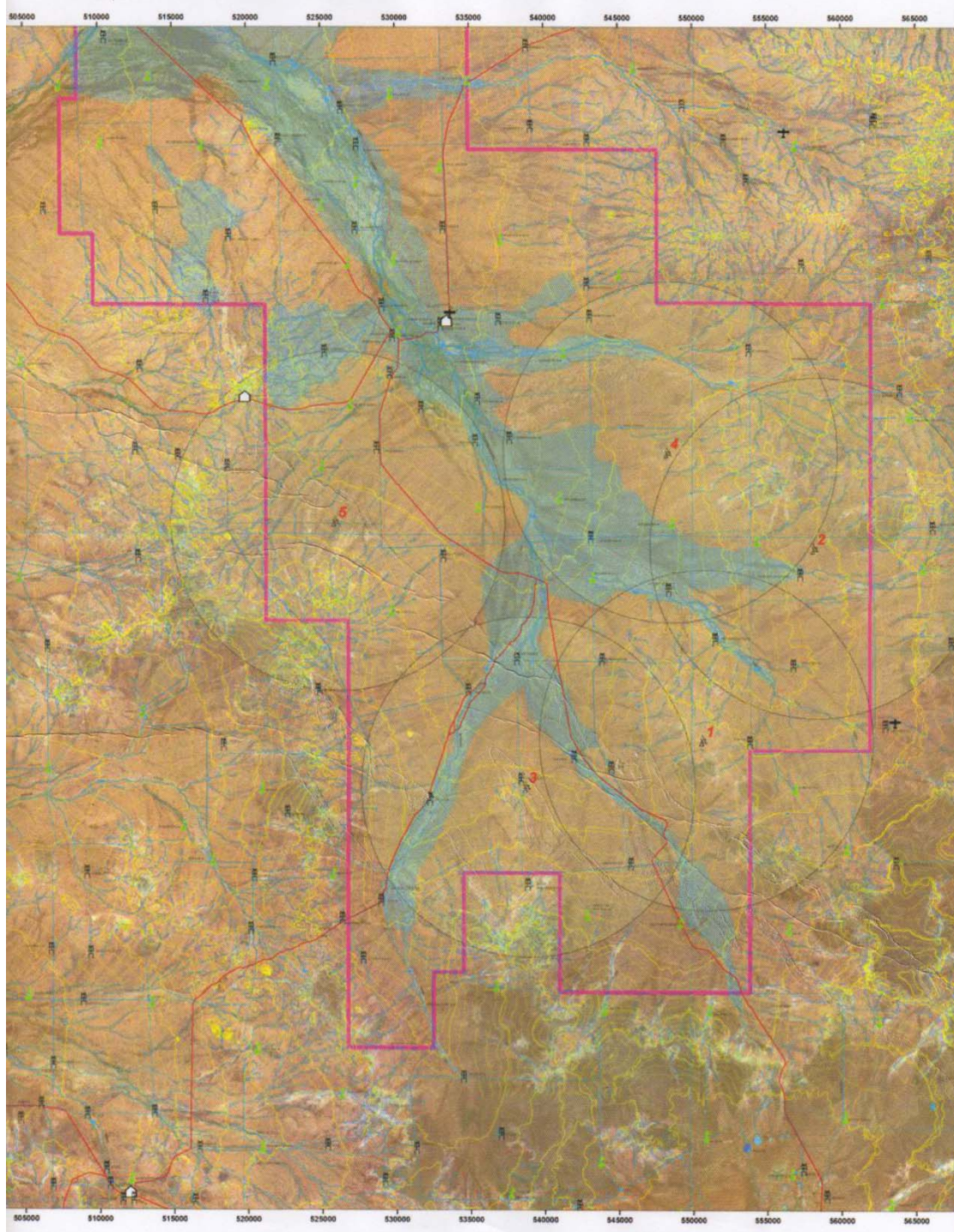
- Mileura Station – accommodation etc
- Radio Astronomy Park / Radio Quiet Zone
- New Minister – Francis Logan
- Management will be under the Dept of Industry and Resources (DOIR)
  - commitment to manage RAP and RQZ
  - infrastructure consultants appointed – GHD Pty Ltd
- Appointm't of a new State RA Committee – May 31
- Cue –Beringarra Road / ore trucks
- Road – preferable option – west from Jack Hills?
- Implementation / Timing – late 2007?
- Longer term is rail for ore movement



**EMC zone boundary (27 km radius)**

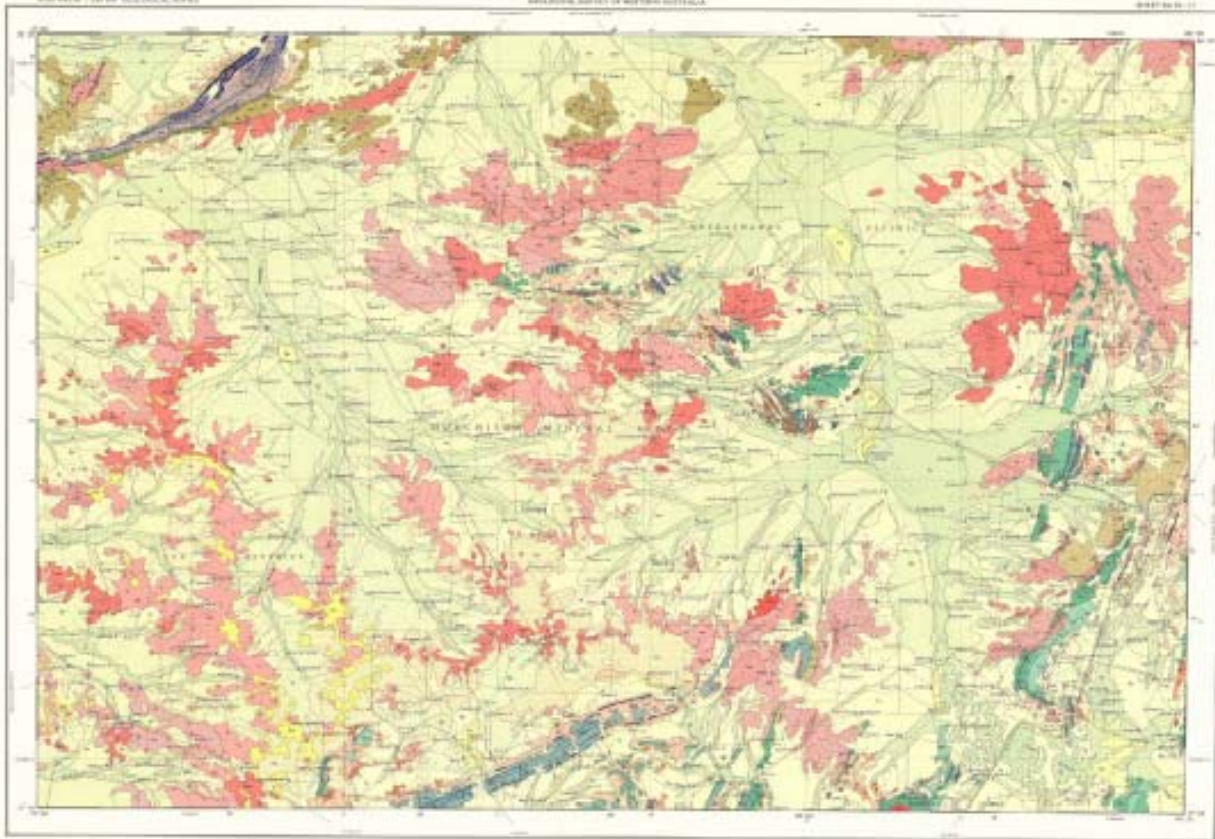
**RAP boundary (5 km x 5 km)**

Route	Description	Distance
R1	Mt. Matthew - Cue - Geraldton	656 km (235 km currently unsealed)
R2	Mt. Matthew - Pindar - Geraldton	489 km (361 km currently unsealed)
R3	Mt. Matthew - Mullewa - Geraldton	520 km (422 km currently unsealed)
R4	Mt. Matthew - Pindar - Geraldton (alternate)	489 km (361 km currently unsealed)
R5	Mt. Matthew - Mount Gould - Meekatharra - Geraldton	729 km (192 km currently unsealed)



# BELELE

AGRICULTURAL DISTRICT OF WESTERN AUSTRALIA



### SYMBOLS

**ROADS**

- 1. Main Road
- 2. Secondary Road
- 3. Track
- 4. Fenced Track
- 5. Railway
- 6. Railway Station
- 7. Railway Signal
- 8. Railway Crossing
- 9. Railway Bridge
- 10. Railway Trestle
- 11. Railway Viaduct
- 12. Railway Tunnel
- 13. Railway Bridge
- 14. Railway Viaduct
- 15. Railway Tunnel

**WATER**

- 1. River
- 2. Stream
- 3. Creek
- 4. Canal
- 5. Dam
- 6. Weir
- 7. Lock
- 8. Bridge
- 9. Trestle
- 10. Viaduct
- 11. Tunnel
- 12. Embankment
- 13. Cutting
- 14. Retaining Wall
- 15. Culvert
- 16. Drainage
- 17. Floodplain
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Area	Value
1	100'
2	200'
3	300'
4	400'
5	500'
6	600'
7	700'
8	800'
9	900'
10	1000'

AGRICULTURAL DISTRICT OF WESTERN AUSTRALIA

Area	Value
1	100'
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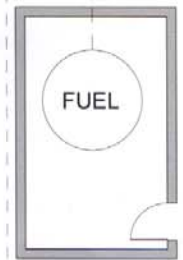
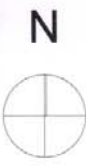
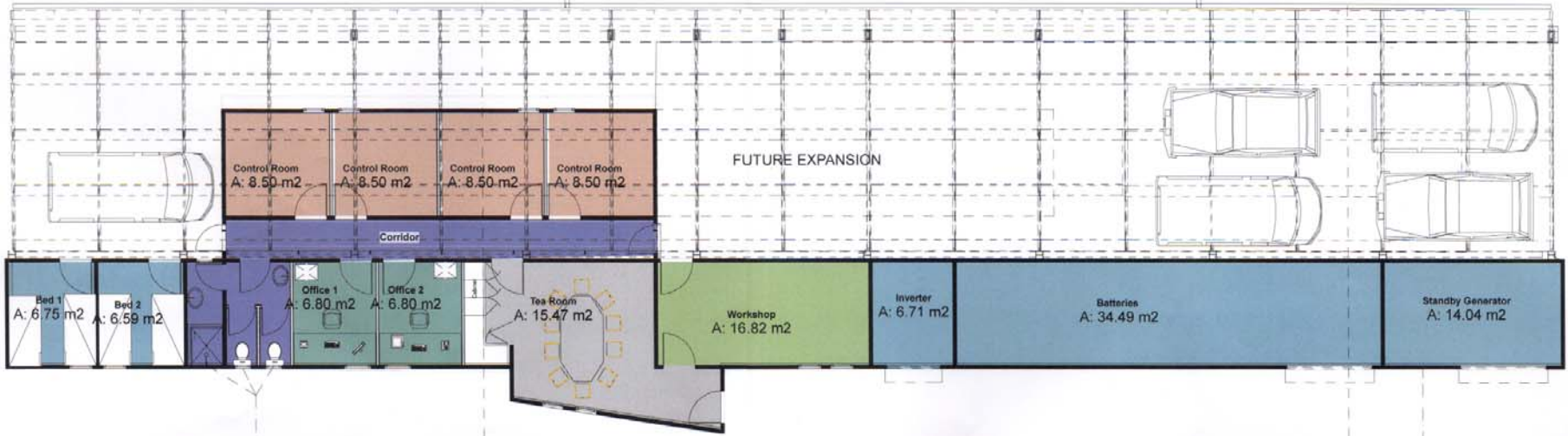
BELELE  
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# Infrastructure Issue - Optical Fibre

## ★ Options: from Mileura

- Mileura -Cue @150 km cost ~\$AUD 2.2 M  
(\$15 / metre without fibre)
- Mileura – Meekatharra (~300 km)
- Mileura west to Geraldton (~350 km)

## ★ Information requested by GHD Pty Ltd

- bandwidth for the long term
- fibre location in RAP

# Infrastructure Issue

- Site Surveying - identify uniform slope
- Screening of LFD from xNTD: use terrain
- Location of the on-site lab below ground etc
- Node cabling - above / below ground?
- Node - lab below ground / vehicle movement
- Fencing cattle out of LFD array ?
- Fibre back to homestead and Cue

# Infrastructure Issue – Power

- ★ ~ 150 - 200 kW for LFD  
(ultimately combine with xNTD ?)  
Located ~ ? km from array (LX  
tranceivers)
- ★ Solar-diesel hybrid
- ★ ~30 kW for tiles / nodes – dc feed ?  
(8x35 W + 100 W rec ~ 500 W; 64 units)  
~ 100 kW for computer and aircon  
~ 10 kW for on-site lab
- ★ Other power requirements? (GPS units)

# Issues – Politics / Funding

## ★ DOIR

- continuing infrastructure funding?
- current \$AUD 3.6 M
- legislation for RQZ

## ★ Murchison Metals / ore trucks / RQZ

- ## ★ Cost of operating the Mileura facility
- shared among research teams / Govt / NCRIS?

Perth – infrastructure  
and /or facilities ?



# Fabrication, Contract Management, Equip Delivery & Commissioning

- Tiles
- Dipoles
- Node Enclosures
- Cables
- Fibre / coax cables
- Power
- Airconditioning
- Laboratory
- Computer

End