



Appendix 1: Project Requirements

SCOPE OF SERVICES

The survey / study will be undertaken by a qualified Biologist who will produce a report, the general headings and contents for which are provided below.

The area to be surveyed for the habitat of the Purple Crowned Fairy Wren is the Victoria Highway from 185 km-220 km, specifically including all: rivers, creeks, crossings, watercourses or culverts. The Survey objective is to quantify the presents/ and or populations of the bird, particularly in its normal habitat in association with Cane grass communities along stream banks. The Wren is understood to move outside the normal feeding area 10 m from watercourses up to 50-100 m distance at times (Dr John Woinarski pers. com. 28/02/05). <http://www.deh.gov.au/biodiversity/threatened/action/birds2000/pubs/pc-fairy-wren.pdf> . The survey/ study will assist the government to comply with the Environment Protection and Biodiversity Conservation Act 1999 EPBC, particularly Part 1.3 &1.3A, hence will require conservation advice and direction for consideration during the road improvement works on the Victoria Highway.

Construction activities

Road improvement works along the Victoria Highway include:

- A 35 Km length of road will be widened, raised and the road surface realigned, as appropriate. Since watercourses are always at the lowest topographical level then this is where the impact of the roadworks will be greatest, because the footprint of new batters will be the increased in breadth. Hence all watercourse crossings are likely to be effected.
- Bridges at 4 watercourses namely the *Victoria River, Creeks/ Joe, Last and Sandy* will be rebuilt, with the new bridge structures situated 20m downstream of the existing alignment (centre line to centreline). During construction, motorists will use the existing bridges to bypass the construction activities.
- A fifth bridge at Escarpment Creek will be improved only, therefore a side track will be required to enable for traffic to bypass the bridge improvement activities. This side track will be located on the downstream side.

Terms of Reference

The survey/study is required to:

1. Quantify the number of Wrens (and Wren territories) in all areas subject to (short-term and long-term) disturbance associated with the development proposal.
2. Assess the significance of possible loss of these individuals (and suitable habitat) relative to the total population of the species and subspecies.
3. Estimate the extent to which disturbance works will further fragment the population in the Victoria River crossing area, and the possible consequences of this further fragmentation.
4. Assess whether the population at this site may be further affected beyond the existing development works (e.g. by change in traffic mortality patterns).
5. Provide advice on adjacent cane grass populations within and in proximity of the road reserve and optimal use of cane grass in revegetation of disturbed areas.
6. Provide advice on other mitigation or offset activities (e.g. cattle enclosure fencing elsewhere that may result in net benefit to this population).
7. Assess the risks of weed spread associated with disturbance activities, and provide protocols that ensure that there is no increased spread of weeds.
8. Develop a monitoring program for this population that provides longer-term assessment of its population trends and the impacts of this development.

The Report format /inclusions

Detail the information in the consultant's report to permit an independent assessment of the results by the Office of Environment and Heritage specialists. Include in the report a format equivalent to the following:

1. Cover Page

This should include title, the organisation for which the report was prepared and its contact address, the author's name and contact address, and the date of the report. Other leading papers should include:

- Table of contents
- List of figures if appropriate
- List of plates if appropriate
- List of tables if appropriate
- Executive summary and recommendations

2. Introduction:

This should contain the location of the survey area, who commissioned the consultancy, the scope of works, report structure, who carried out the survey and report preparation.

3. Physical Environment

This section should contain a description of the physiography, geology, hydrology, land systems, vegetation, current land use and integrity where appropriate. A map of the survey area should be included.

4. Cultural Setting

This will include a brief description of adjacent land uses particularly in the water course zones. If it is necessary to create new Purple Crowned Fairy Wren habitats on private land outside the road reserve, then compile a list of neighbouring landowners and their contact details, with a view for DIPE collaboration with these persons.

5. Previous Biological Research

This should contain an overview of previous biological research in the general area and previously recorded sites on databases held by Heritage Conservation Services which may be in the survey area.

"The information we hold here at Biodiversity Conservation (CNR) is sufficient to indicate that there may be some impact of your proposed works on a nationally threatened sp. But our information is not adequate to quantify that impact, nor accurately assess its severity". (Dr John Woinarski (EM, 25/02/05))

6. Methodology

Give a description of the survey methodology including when the survey was carried out, over what time period, and the survey strategies employed; site recording methodology including definitions of "site" and site types as appropriate;

An indication of the actual survey coverage including area actually traversed (indicated on a map) together with an estimate of the effective coverage should be included in the results section.

7. Results

Include a description of ground visibility in the survey area at the time of the survey, the survey coverage achieved by the survey methodologies described in section 6 above.

Provide site descriptions with data for the following:

- Site Location: 13 digit easting and northing, compliant with the GDA94 Datum, and map sheet reference.
- Site Setting: biogeographic zone, geomorphology, vegetation mapping unit, distance to water.
- Site Contents:
- Site Disturbance (if any).

8. Discussion



Discuss the significance of biological fauna and fauna values.

9. Summary and Recommendations

This section should contain a summary of the survey results together with recommendations concerning:

- whether or not permission should be given to disturb the archaeological materials (if any), and
- mitigative procedures and suggested management options where appropriate. This section should also clearly indicate those archaeological materials, if any, for which a permit to disturb under the *Heritage Conservation Act* 1991 will be required.

10. References

Include references in accordance with the Harvard System. Include a copy of this brief.

11. Appendices

Include where appropriate.

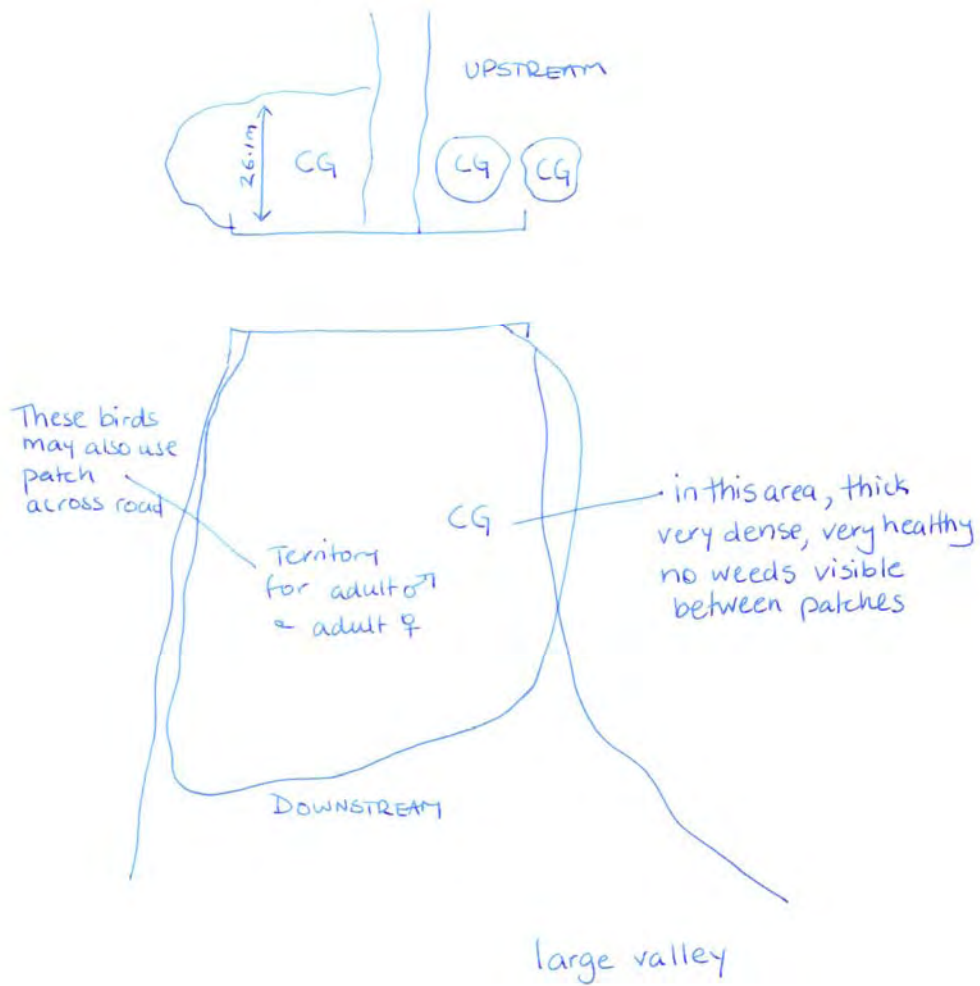
Report deliverables

Provide the Project Officer with two bound hard copies printed on A4 paper. Maps and appendices will be printed on A3 or A4 as appropriate for legibility. Provide a digital copy of the full, completed report in *.pdf format.

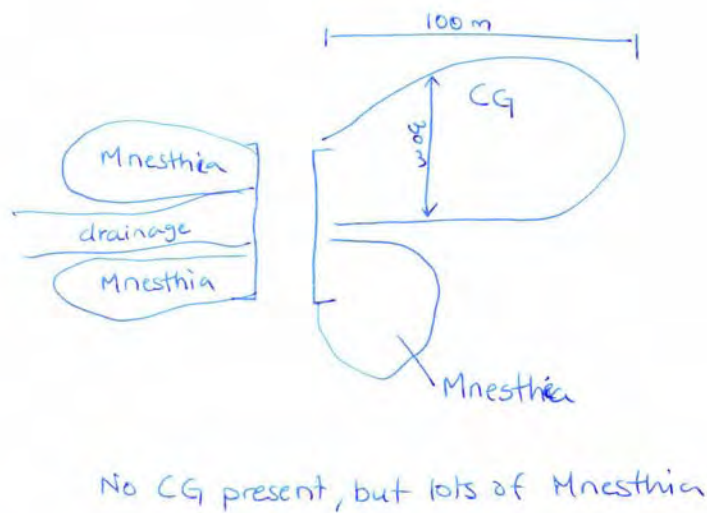


Appendix 4: Cane Grass Patch Sketches

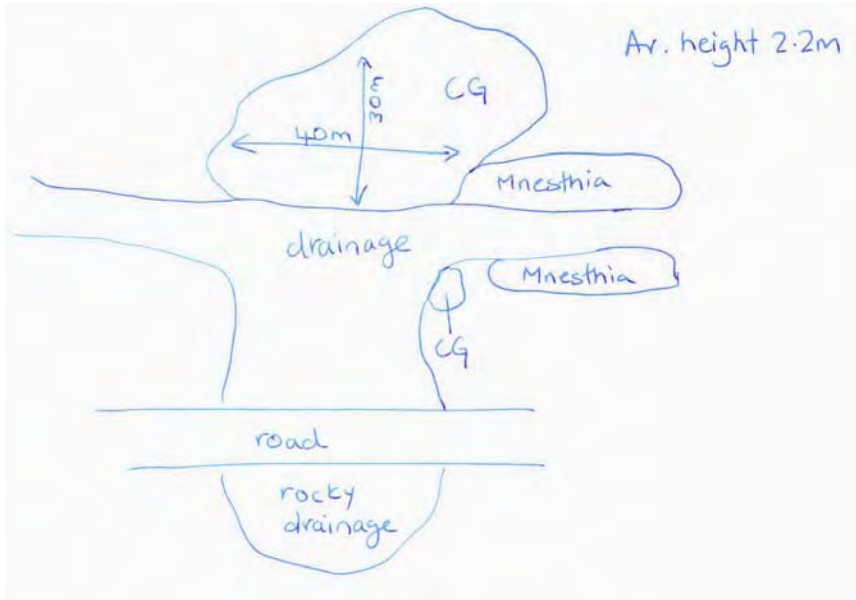
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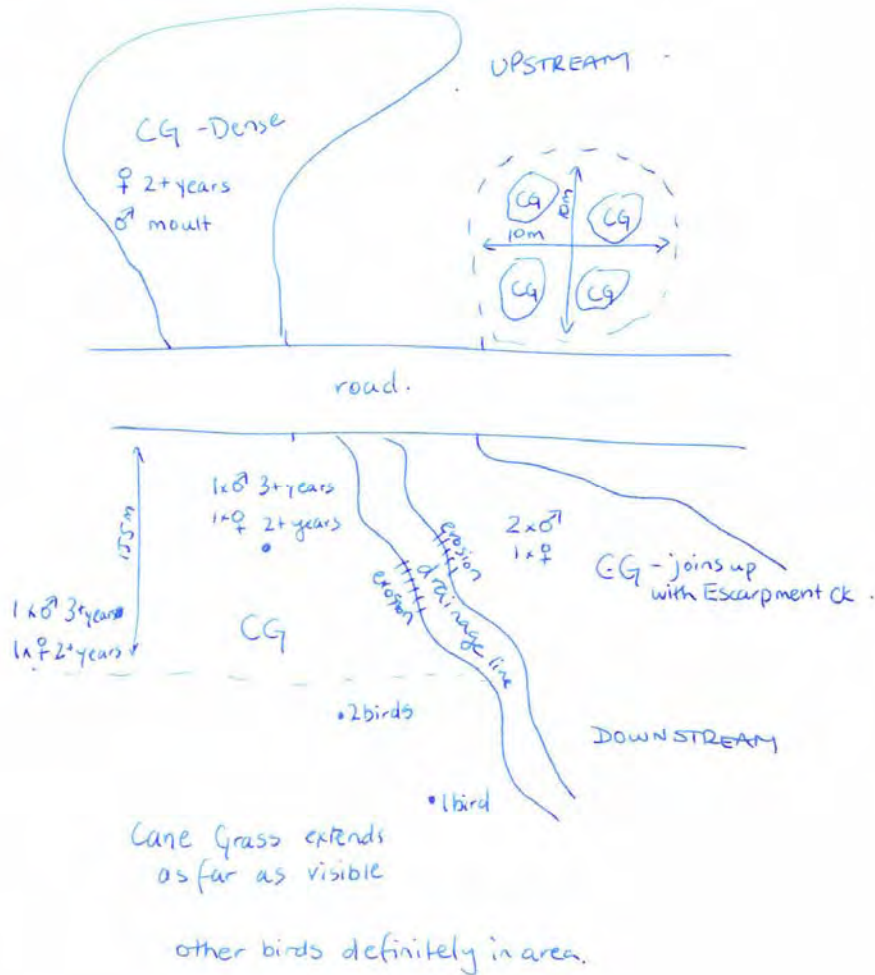
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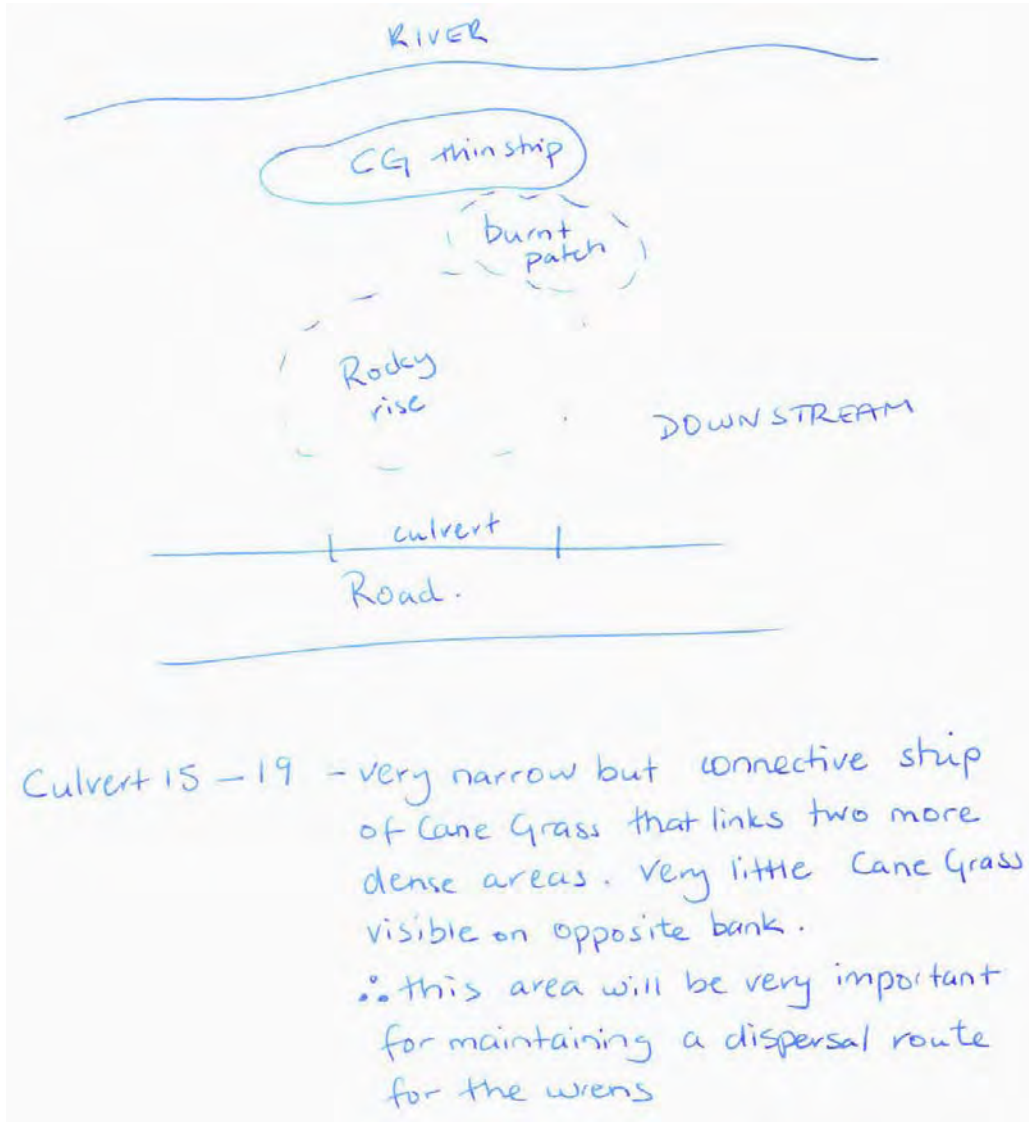
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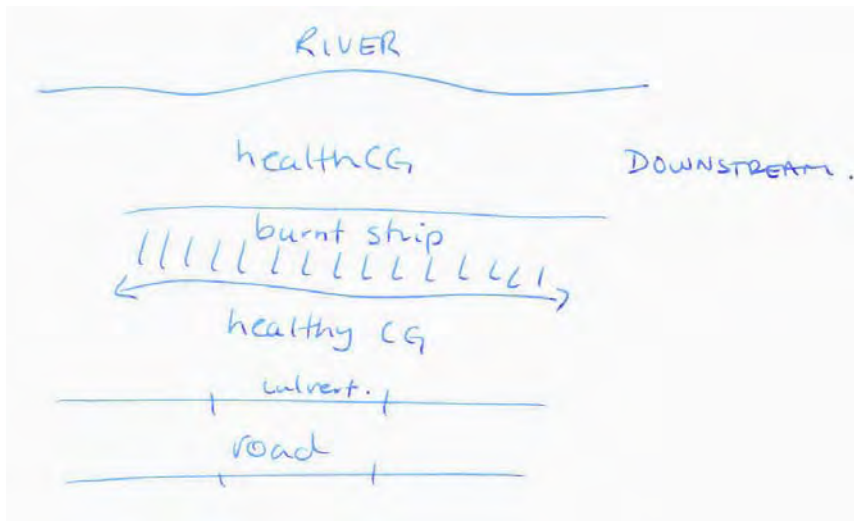
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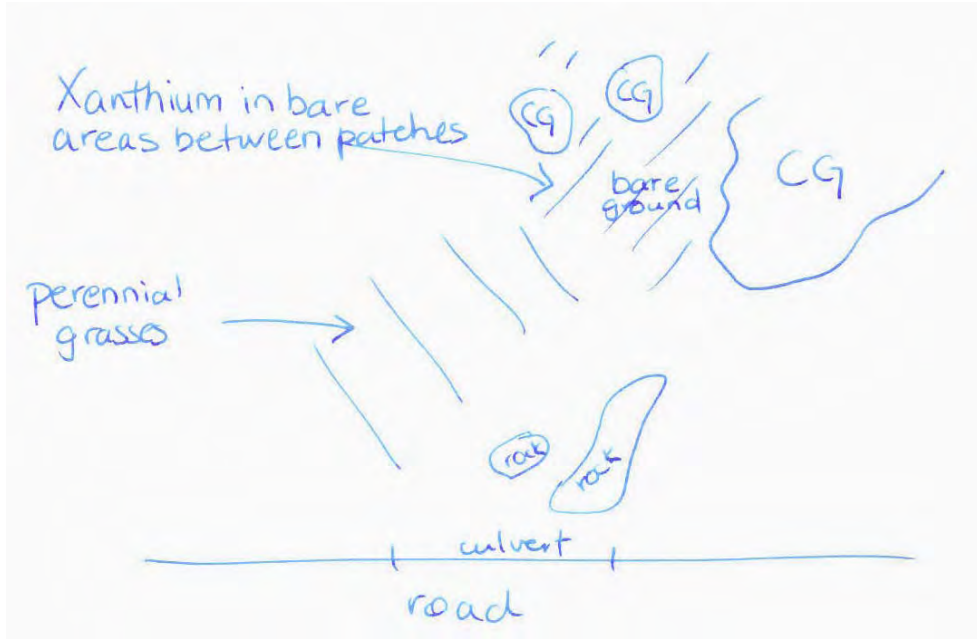
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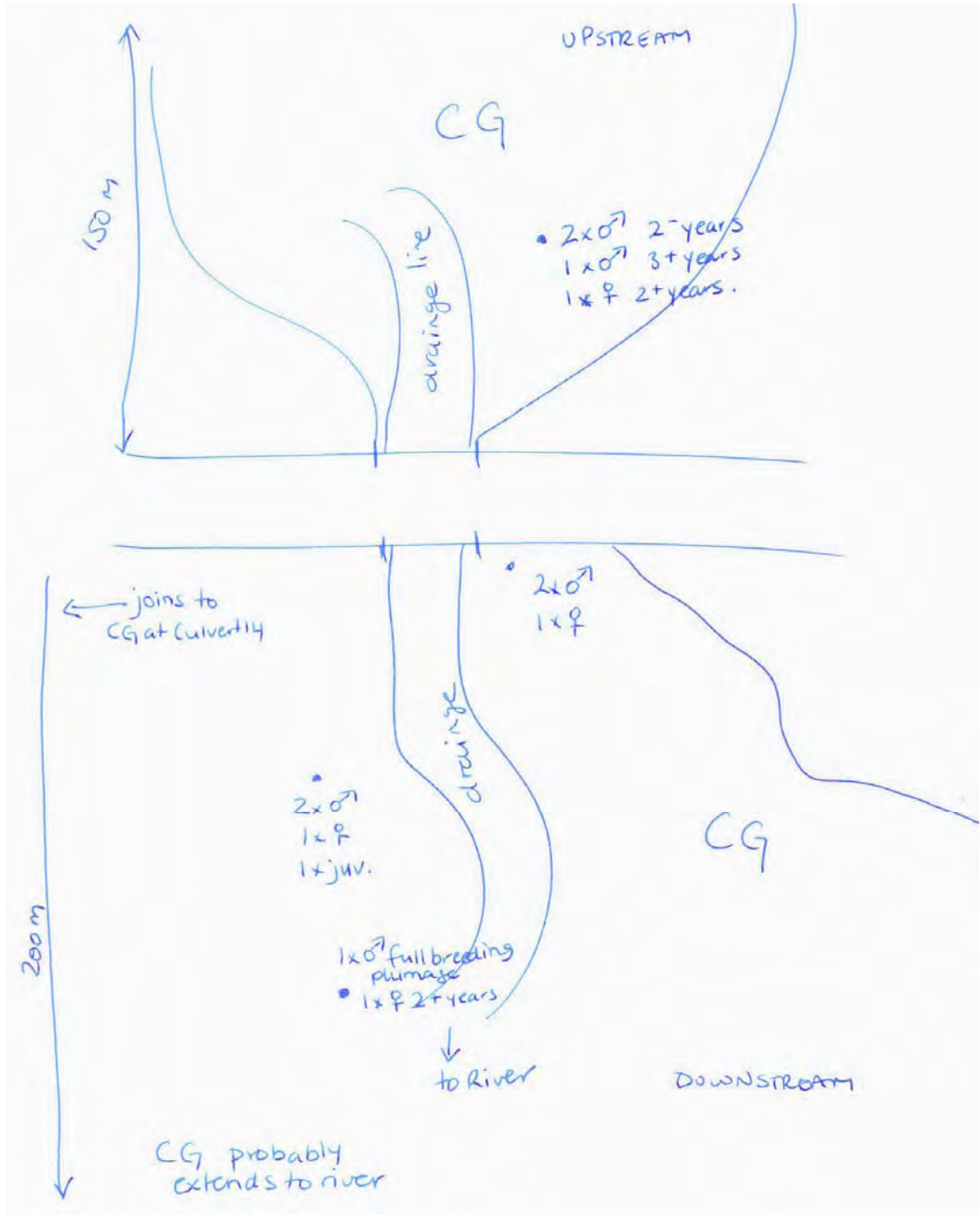
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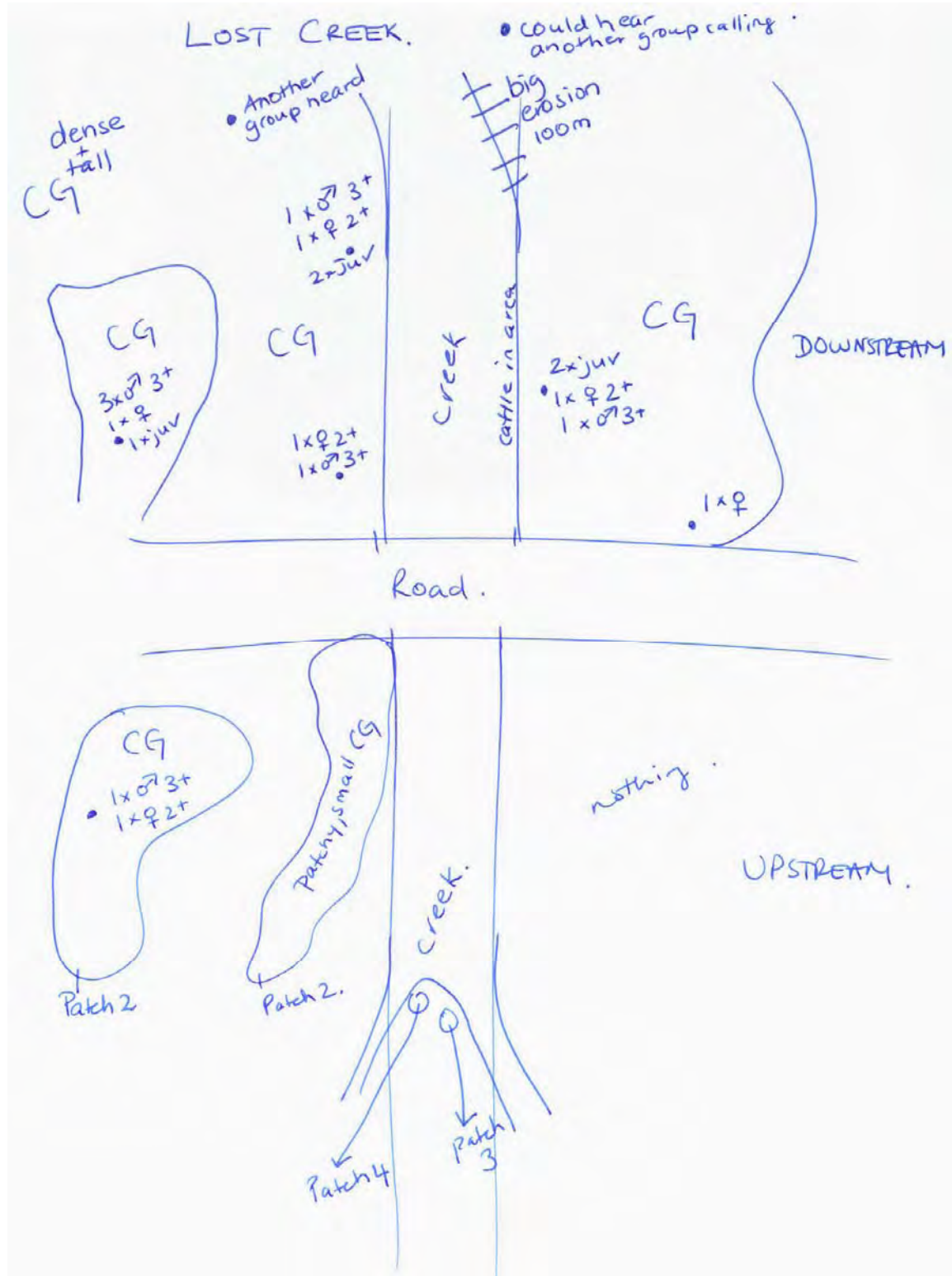
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Escarpment Creek



Lost Creek



Victoria River

