Green and Golden Frog
(Litoria raniformis)
Management Guideline
Overview

- Species: habitat, distribution, legislation
- Management issues; frogs and roads-unlikely bedfellows
- Creation of the guidelines
- Application: Perth to Bredalbane Duplication
- Lessons learnt
Love affair begins at an early age....
Litoria raniformis

• South-eastern Australian mainland and Tasmania
• 80mm length, 40gm
• Breeding (November to March)
• Listed under the Environment Protection Biodiversity Conservation Act 1999 (Cwlth)
• Threatened Species Protection Act 1995 (Tas)
• Threatened Species Conservation Act 1995 (NSW)
• National Parks and Wildlife Act 1972 (SA)
• Melbourne Strategic Assessment program area (Vic)
Unlikely Bedfellows: Roadsides as Habitat

- Breeding habitat
- Foraging habitat
- Refuge habitat
- Connectivity habitat
Threats

- habitat loss and fragmentation
- habitat degradation
- altered flooding regimes
- disease
- drought
- road kills
- chemicals, including fertilisers
Management: Frogs and Roads

Representation of wildlife movements when considering road design on a) wildlife populations b) avoidance c) fragmentation and d) management (VicRoads 2012)
Detailed Design
Frog culvert cross section

Department of State Growth 2015
Constructed frog habitat lagoon concept

Source GHD 2011
Pre-Construction
Pre-construction

• Installation of site offices
• Clearing and grubbing
• Relocation of services
• Establishment of site controls
• Designation of Exclusion zone-No Go Areas
• Clearing frogs from construction corridors
• Chytrid management during capture and release of frogs
• Works in waterways
• Scheduling of works
• Sediment Management
• Contamination Prevention
• Site Rehabilitation
Post Construction
<table>
<thead>
<tr>
<th>#</th>
<th>Monitoring and Maintenance Requirement</th>
<th>Specific Task</th>
<th>Timing</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Monitoring</td>
<td>Vegetation, survey, weed inspection and to monitor the level of any public disturbance in and around habitat</td>
<td>Annually or as determined by State Growth.</td>
</tr>
<tr>
<td>2</td>
<td>Population Survey</td>
<td>Targeted Survey.</td>
<td>Annually or as determined by State Growth in consultation with DPI/PWE.</td>
</tr>
<tr>
<td>3</td>
<td>Wetland Vegetation Survey.</td>
<td>Vegetation Survey.</td>
<td>First two years following completion of pond. Thereafter, as determined by state growth.</td>
</tr>
<tr>
<td>5</td>
<td>Maintenance</td>
<td>Protective fence, exclusion barriers.</td>
<td>As determined by State Growth.</td>
</tr>
<tr>
<td>6</td>
<td>Routine maintenance of terrestrial habitat.</td>
<td>Pond clean-out.</td>
<td>Annually or as determined by State Growth in consultation with DPI/PWE.</td>
</tr>
<tr>
<td>7</td>
<td>Habitat maintenance.</td>
<td>Revegetation; additional planting to ensure pods and terrestrial habitats remain suitable, (i.e. weed removal, mowing).</td>
<td>As determined by State Growth.</td>
</tr>
<tr>
<td>8</td>
<td>Manage the level of any public disturbance in and around habitat.</td>
<td>Fence off areas such as movement corridors where impacts are considered a risk to GGF.</td>
<td>As determined by State Growth.</td>
</tr>
<tr>
<td>9</td>
<td>Pollution and stormwater maintenance.</td>
<td></td>
<td>As determined by State Growth.</td>
</tr>
</tbody>
</table>
Perth to Bredalbane Duplication
Perth to Bredalbane Duplication

Department of State Growth, 2014
Constructed frog habitat lagoon

Department of State Growth, May 2016
Constructed culvert
Department of State Growth, February 2018
Lessons learnt

- Contractor buy in
- Ongoing maintenance-fencing
- Ensure adequate weeding
- Monitoring
Broader application

- Road authorities
- Local council
- Forestry, mining agricultural sectors
- Consultants
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VicRoads