



Project: WASTEWATER STORAGE AND IRRIGATION SCHEME

Location: Bannockburn, Victoria

Client: Barwon Water

Background

Barwon Water required the assessment of geological and hydrogeological features, and the impact of effluent storage/irrigation on the underlying groundwater system. Piper & Associates commissioned C. M. Jewell & Associates Pty Ltd to undertake these investigations.

Hydrogeological Environment

A mix of Tertiary age sediments are underlain by Palaeozoic granite basement rocks. Although, not extensive at the irrigation site, Quaternary basalt flows are found overlying Tertiary sediments, along with alluvium and aeolian sands. Groundwater flow is towards a local creek drainage.

Potential Contaminants

- Nitrate and ammoniacal nitrogen
- Faecal coliforms
- Pathogenic organisms

Objectives and Scope

Several electromagnetic surveys were conducted in the course of the study. A ground conductivity survey using a Geonics EM34-3 conductivity meter at 60-metre dipole spacing was run as parallel traverse lines. Subsequently, electromagnetic soundings to resolve the depth distribution of sands, silts and clays underlying the site was undertaken.