

DRAINAGE FLATS ON QUATERNARY RECENT DEPOSITS

Land system: Traralgon – Freehold land only.

The land type occurs on the low level drainage floors of the Tanjil River south of Willow Grove. These drainage floors are formed on Recent, predominantly clayey alluvium (QRA), are often ill drained and have an active flooding regime. They contain more or less sinuous central stream channels.

The soil types are variable depending on the nature of deposited material and the length of time since deposition, but commonly somewhat poorly drained and non arable.

The native vegetation, now largely cleared, was probably mainly shrubby open forest dominated by swamp gun (*E. ovata*), whilst in some better drained portions, messmate (*E. obliqua*), narrow-leaf peppermint (*E. radiata*) and manna gum (*E. viminalis*) may be present.

Two basic mapping units DF1 and DF2 have been distinguished here on the basis of elevation and drainage status, the former being lower and less well drained.

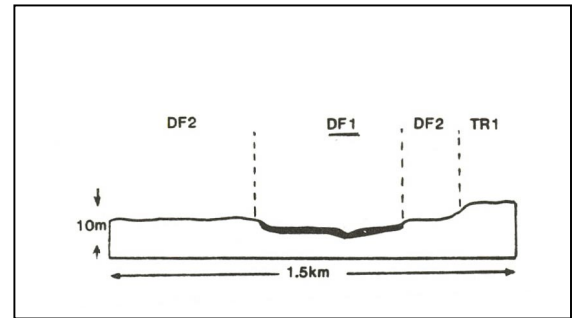
DRAINAGE FLATS ON QUATERNARY RECENT DEPOSITS

Map Unit: DF1

DF1 – Low level drainage flats subject to frequent flooding.

Extent of Occurrence:

465 ha – adjacent to Tanjil River in areas south of Willow Grove, and most extensively below Tanjil South (Freehold land only).



Landscape: Flat, lower level flood plains adjacent to the Tanjil River.

Slope Range: 0-2% *Elevation Range:* 50-100 m

Relief: 0-3 m *Surface Drainage:* Poorly drained

Soils: Very variable, depending on nature of antecedent and adjacent terrain. Uniform friable loams and gradational grey brown earths are most common (Soil Types 6, 1).

Classification: Um6.14, Gn4.52, also Dy5.51, Gn2.21, Uc5.11
Minimal Weisenboden, Yellow Earths

Depth: Greater than 150 cm *Surface Texture:* Sand to loamy sand

Stone/Gravel: - *Profile Drainage:* Moderately well, to somewhat poorly drained.

Shrink-Swell Potential: Low *Dispersibility:* Low to moderate; silty “grey soils” occurring in upper reaches are most dispersible.

CAPABILITY EVALUATION					Limiting Factors						
FOR	Steepness	Site Drainage	Landslip Risk	Flood Risk	Proximity to River	Soil Depth	Soil Drainage/Permeability	Soil Dispersability	Soil Shrink-Swell	Stones/Gravel	Capability Rating
General Construction	●			●	●		●	●			● 5
Effluent Disposal	●			●	●		●				● 5
Erosion Risk				●	●			●			● 3
<i>Dot size indicates importance of factor</i>					Overall Rating: Rural-Residential Development						● 5

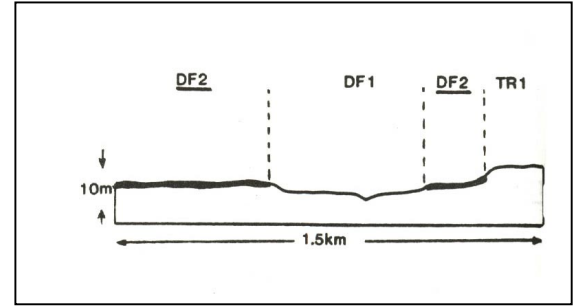
Limitations to Development:

1. Moderately high erosion hazard due to position as runoff concentration areas.
2. High flood risk acres.

DRAINAGE FLATS ON QUATERNARY RECENT DEPOSITS

Map Unit: DF2
DF2 –High level drainage flats, less subject to flooding.

Extent of Occurrence:
282 ha – associated with Tanjil River, most commonly below Tanjil South (Freehold land only).



Landscape: Generally flat, flood plain areas, marginally higher than DF1

Slope Range: 0-2% *Elevation Range:* 50-110 m

Relief: 0-2 m *Surface Drainage:* Poorly drained

Soils: Structured grey brown and yellowish brown earths and less commonly, uniform friable loams.

Classification: Gn4.81, Gn4.51, Um6.12
Yellow Earths, Weisenboden

Depth: Greater than 120 cm *Surface Texture:* Loam to silty clay loam

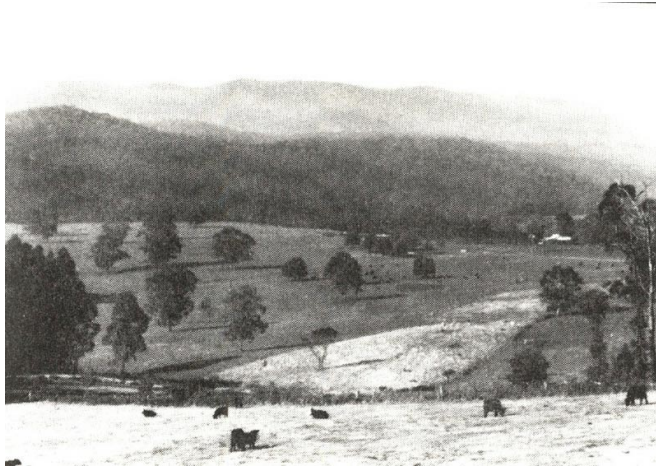
Stone/Gravel: - *Profile Drainage:* Somewhat poorly drained

Shrink-Swell Potential: Low *Dispersibility:* Low to moderate

CAPABILITY EVALUATION					Limiting Factors						
FOR	Steepness	Site Drainage	Landslip Risk	Flood Risk	Proximity to River	Soil Depth	Soil Drainage/Permeability	Soil Dispersability	Soil Shrink-Swell	Stones/Gravel	Capability Rating
General Construction	●			●			●				● 4
Effluent Disposal	●			●	●		●				● 4
Erosion Risk								●			● 2
<i>Dot size indicates importance of factor</i>					Overall Rating: Rural-Residential Development						● 4

Limitations to Development:

1. Slight erosion hazard due to position as runoff concentration areas.
2. Moderately high flood risk.
3. Effluent disposal limited by soil permeability and drainage.



CR1, SS3a, SS4a – Gently undulating crests with gentle to moderate sideslopes, near Hill End. Steep hilly terrain of La Trobe land system in background.



Near Willow Grove

Centre – Drainage flats (DF1) showing river meanders

Background – Crest units (CR1, CR3) with steep sideslopes (SS1a)

Right – Moderate slopes (SS2c)



Near Tanjil South

Lower reaches of Tanjil River (in flood), showing moderate sideslopes (SS2c) in foreground, drainage flats (DF1) and terraces (TR1) in centre, and gentle to moderately steep slopes SS3c, SS2c) in background.



Lower reaches of Tanjil River in flood, winter 1981. In summer, river level is approximately 2 m lower.



Hilly terrain on sub-alpine plateau (Baw Baw land system)

In the highest parts of the catchment relatively flat heathlands receive runoff from adjacent low, snow gum covered hills. Courtesy L. Russell.