

DRAINAGE CHANNELS AND WATERCOURSES THROUGHOUT HILLY TERRAIN

Land System: Components of upland systems – Freehold and public land

This land type occurs throughout all upland areas over a variety of geological types. The soils will therefore be quite variable. In areas where the dominant process is one of attrition or removal the soil types will bear a direct relationship to the underlying geology. However in lower parts of the catchment on lesser slopes, where some alluvial deposition has occurred, the nature of the soil will be related to the nature of adjacent hills and the terrain through which the drainage system has already passed. In general however, soils in drainage channel areas are somewhat poor to poorly drained, and in the lower reaches at least, are quite deep.

Public land

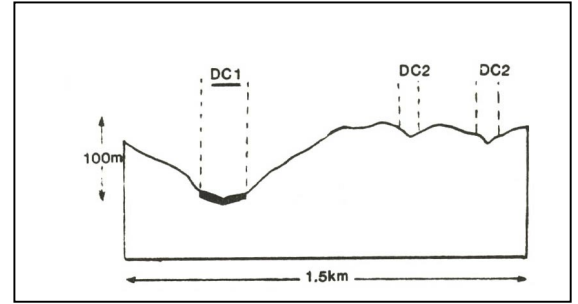
In areas of public land in the catchment, the mapping scale prohibits delineation of all drainage channels and watercourses. In these areas only relatively broad drainage floors with deposited alluvium have been delineated, and these have been separated out as components of the particular land systems within which they occur.

Freehold land

Within the detailed study areas (freehold land) two basic mapping units have been delineated DC1, and DC2. The former is associated with major creeks and stream lines where deposited material accumulates, whilst the latter may be little more than an intermittently flowing gully or non-incised watercourse on hill slopes higher in the catchment system.

DRAINAGE CHANNELS THROUGHOUT HILLY TERRAIN

Map Unit: DC1 – Major drainage channels with alluvial deposits.



Extent of Occurrence:
278 ha – mainly as tributary streams throughout catchment (Freehold land only).

Landscape: Major drainage channels, incised watercourses and permanent streams.

Slope Range: 1-5% *Elevation Range:* 70-510 m
Relief: 1-5 m *Surface Drainage:* Somewhat poor to poorly drained

Soils: Variable, depending on nature of antecedent terrain; commonly structured yellow brown or red brown earths (Soil Types 2, 4).

Classification: Gn4.81, Gn4.31
Yellow Earths, Brown Earths

Depth: Greater than 100 cm *Surface Texture:* Loam

Stone/Gravel: Small amounts of stone and gravel are common *Profile Drainage:* Moderately well drained

Shrink-Swell Potential: Low *Dispersibility:* Low except in areas near silty rock types

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:

- Moderately high erosion hazard due to position as runoff concentration areas.
- High flood risk areas.

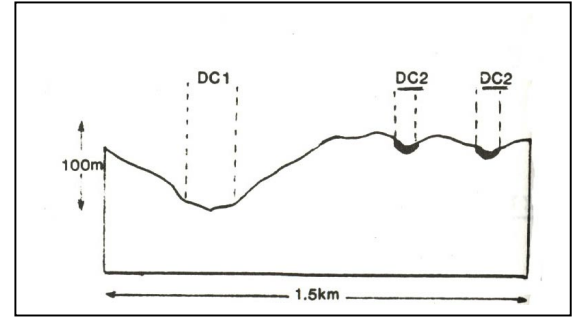
DRAINAGE CHANNELS THROUGHOUT HILL TERRAIN

Map Unit: DC2

DC2 – Minor drainage channels on steeper slopes, with less alluvial deposits.

Extent of Occurrence:

1048 ha – Mainly as narrow intermittent tributaries throughout catchment hill areas (Freehold land only).



Landscape: Minor drainage channels, incised watercourses and intermittent streams.

Slope Range: 2-15%

Elevation Range:

60-700 m

Relief: Locally about 10 m, however unit often linearly, extensive.

Surface Drainage:

Somewhat poor to poorly drained.

Soils: Variable, depending on nature of adjacent terrain; commonly structured grey brown earths, red brown earths or uniform friable loams (Soil Types 1, 4, 6).

Classification: Gn4.51, Gn4.31, Um6.14

Yellow Earths, Brown Earths.

Depth: Greater than 120 cm

Surface Texture: Sandy loam to loam

Stone/Gravel: -

Profile Drainage: Somewhat poorly drained

Shrink-Swell Potential: Low

Dispersibility: Low to moderate in areas with silty soil parent material

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	●			●●	●●			●			● 4
<i>Dot size indicates importance of factor</i>					Overall Rating: Rural-Residential Development						● 4

Limitations to Development:

1. Moderately high erosion hazard due to slope and position as runoff concentration areas.
2. Effluent disposal and construction limited by soil drainage.