

LEGEND OF SOIL AND TAXONOMIC UNITS ARRANGED PEDOLOGICALLY

Yellow-Brown Earths And Related Steepland Soils

- weakly to moderately leached
 - Whaka series
 - Puhoi series
 - Atanui series
- moderately to strongly leached
 - Whareora series
 - Whangaripo series
 - Waioira series
 - Aponga series
 - Manua series
 - Tikitohe series
 - Maungarei series
 - Te Ranga series
- strongly leached to weakly podzolised
 - Waipuna series
 - Rockvale series
 - Warkworth series
 - Mata series
 - Okaka series
 - Rangiora series
 - Piroa series
 - Pukekaroro series

Podzolised Yellow-Brown Earths

- weakly to moderately podzolised
 - Albany series
 - Tangitiki series
 - Mahurangi series
 - Waikare series
- moderately podzolised
 - Coatesville series
 - Hukerenui series
 - Pukenamu series

Podzols

- Kara series
- Wharekohe series
- Parahaki series

Rendzinas and Associated Soils

- Arapohue series
- Motatau series
- Maungaturoto series
- Konoti series

Yellow-Brown Sands

- weakly weathered
- weakly to moderately leached
 - Marsden series
 - Whananaki series
- moderately weathered
- moderately to strongly leached
 - Red Hill series

Yellow-Brown Loams and Podzolised Yellow-Brown Loams

- strongly leached
 - Otao series
- weakly podzolised
 - Waitemata series

Brown Granular Loams and Clays and Related Steepland Soils

- weakly to moderately leached
 - Te Kie series
- moderately to strongly leached
 - Dome Valley series

Brown Loams

- moderately to strongly leached
 - Waioitu series
 - Ruatangata series

Gley Soils

- Tawharanui series
- Waipua series
- weakly saline
 - Takahiwai series

Organic Soils

- One Tree Point series
- Ruakaka series
- Otonga series

Recent Soils

- Whakapara series

LEGEND OF SOIL MAPPING UNITS ARRANGED PHYSIOGRAPHICALLY

Soils of the Flood Plains

- well to moderately well drained
 - Whakapara silt loam and clay loam
- imperfectly to very poorly drained
 - Whakapara mottled clay loam

Soils of the Estuarine Flats and Former Lake Beds

- imperfectly to very poorly drained
 - Takahiwi sand
 - Takahiwi clay
 - Tawharanui sand
 - Tawharanui peaty sand

Soils of the Coastal Sand Dune Complex

- excessively to somewhat excessively drained
 - Marsden sand
 - Whananaki sand
- well to moderately well drained
 - Red Hill sandy loam
 - Tangitiki sandy loam and sand
- imperfectly to very poorly drained
 - One Tree Point peaty sand
 - Ruakaka peaty sandy loam
 - Ruakaka loamy peat

Soils of the Undulating Terraces and Lowlands

- well to moderately well drained
 - Otao silt loam
 - Whareora clay loam
 - Otao-Waitemata-Albany-Coatesville-Otonga complex
- imperfectly to very poorly drained
 - Waipuna clay
 - Kara sandy loam
 - Kara silt loam
 - Kara peaty silt loam
 - Otonga peaty clay loam
 - Otonga loamy peat
 - Waipua clay
 - Waipua peaty silt loam and peaty clay

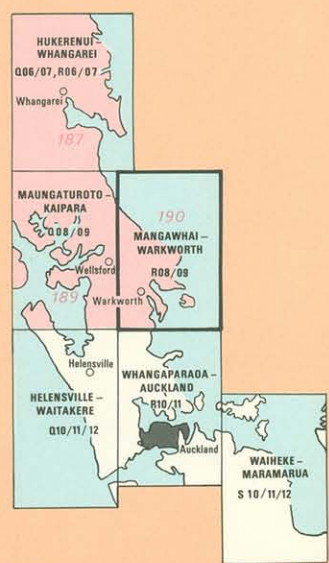
Soils of the Rolling and Hilly Land

- well to moderately well drained
 - Tikitohe gravelly silt loam
 - Waioitu friable clay
 - Ruatangata friable clay
 - Manua clay loam
 - Manua light brown clay loam
 - Whangaripo clay loam
 - Whangaripo clay loam
 - Dome Valley clay
 - Maungarei clay
 - Warkworth clay and sandy clay loam
- imperfectly to very poorly drained
 - Whangaripo clay
 - Waioira brown clay loam
 - Konoti clay loam
 - Aponga clay
 - Rangiora clay, clay loam and silty clay loam
 - Mata brownish clay
 - Mahurangi fine sandy loam
 - Whaka clay loam
 - Puhoi clay loam
 - Puhoi light brown clay loam
 - Okaka clay and silty clay
 - Piroa clay
 - Waikare silty clay
 - Waikare silt loam
 - Hukerenui gravelly silt loam
 - Hukerenui silt loam
 - Pukenamu silt loam
 - Motatau clay
 - Rockvale clay
 - Rockvale clay with coarse-structured subsoil
 - Wharekohe sandy loam
 - Wharekohe fine sandy loam
 - Wharekohe fine sandy loam with pan
 - Parahaki fine sandy loam and silt loam
 - Maungaturoto clay
 - Arapohue clay

Soils of the Steep Land

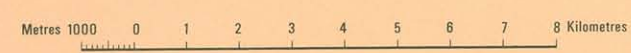
- well to moderately well drained
 - Te Kie steepland soils, stony clay loam
 - Atanui steepland soils, clay loam
 - Te Ranga steepland soils, clay loam and stony clay loam
 - Te Ranga steepland soils, light brown clay loam and stony clay loam
- imperfectly to very poorly drained
 - Pukekaroro steepland soils, clay loam
- Hill soils
- Steepland soils
- Drifting and/or recently stabilised sands
- Wet swamps (not investigated)
- Mottled soils
- Gravelly soils
- Soil boundary

SHEET INDEX



NEW ZEALAND LAND INVENTORY

SCALE 1 : 100 000

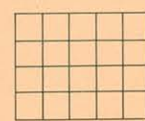


REFERENCE

- WHANGAREI Cities
- KAIKŌHE Towns
- Houbara Settlements
- State highways
- Other roads
- Tracks
- Railways
- Rivers and streams
- Trig stations
- Vincula (separate parcels under same ownership)
- Land holding boundaries
- Sand and mud

This map is drawn on the New Zealand Map Grid Projection, a minimum-error conformal projection. The grid is the New Zealand Map Grid, showing coordinates in metres in terms of the Geodetic Datum 1949, based on the International (Hayford) Spheroid.

The smallest area mapped is generally not less than 10 hectares. Calculation of areas from this map should be within the limitations of scale. For example, individual areas should be rounded to the nearest 5 hectares. Accumulated areas should be rounded to the nearest 50 hectares.



AREAL SCALE
500 hectares divided into units of 25 hectares



Published by the Department of Lands and Survey, New Zealand, under the authority of I.F. Stirling, Surveyor General.

P.D. Hasselberg, Government Printer, Wellington, New Zealand.

Soil Surveys by C.F. Sutherland, N.H. Taylor and A.C.S. Wright 1937-1951, compiled by J.E. Cox et al. 1978, all of Soil Bureau, Department of Scientific and Industrial Research.

BIBLIOGRAPHIC REFERENCE: Sutherland, C.F., Cox, J.E., Taylor, N.H., Wright, A.C.S. 1980. Soil map of Mangawhai-Warkworth area (sheets R 08/09), North Island, New Zealand. Scale 1:100 000 N.Z. Soil Bureau Map 190

This map is one of a series. Themes mapped in this study are: Land Tenure and Holding, Rock Types and Surface Deposits, Soils, Existing Land Use, Wildlife.