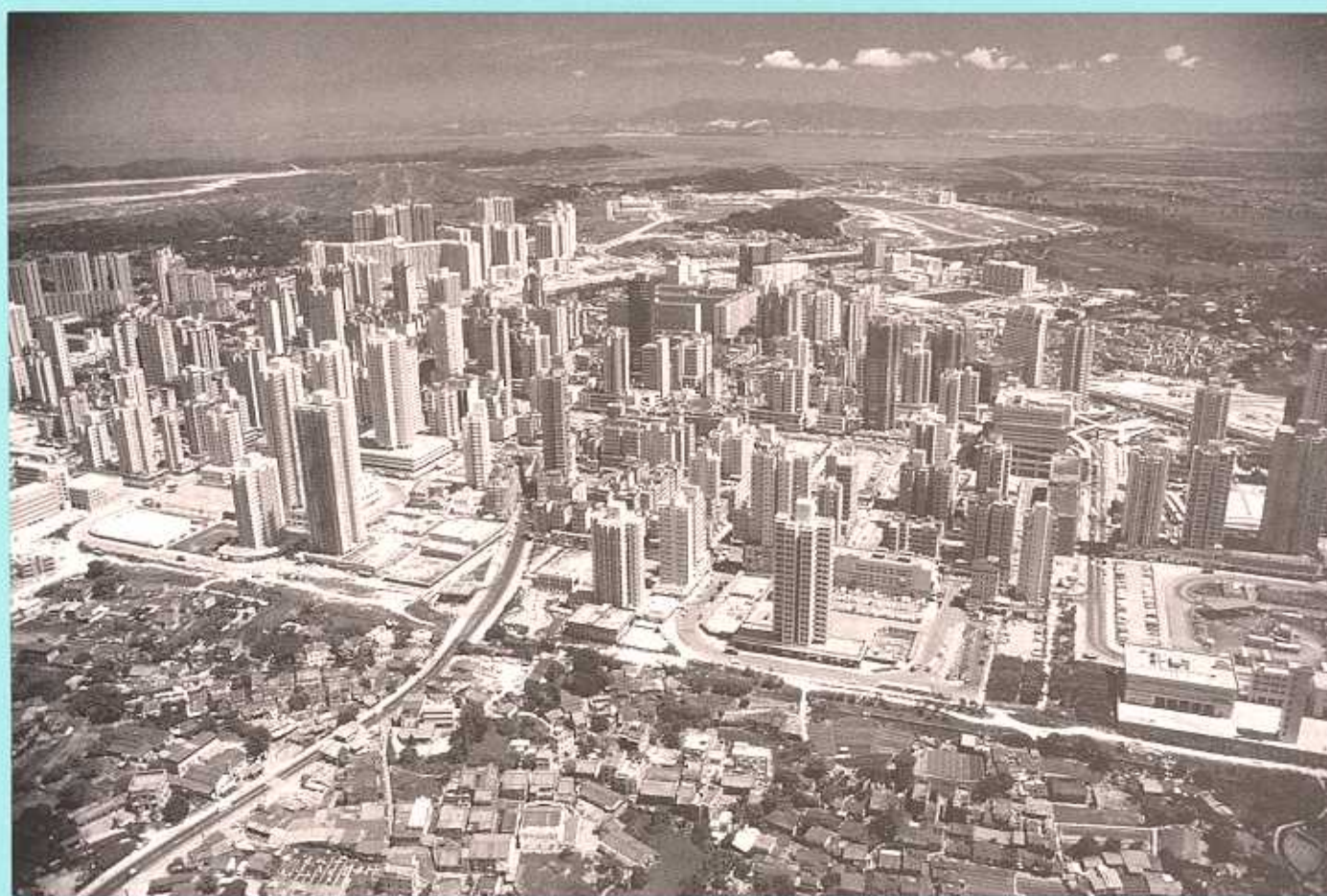


Geology of Yuen Long



Geotechnical Engineering Office
Civil Engineering Department
HONG KONG

Geology of Yuen Long

**1:5 000 Sheets 2-NE-D, 2-SW-C, 2-SW-D, 2-SE-A,
2-SE-B, 3-NW-C, 6-NW-A, 6-NW-B,
6-NW-C & 6-NW-D
D.V. Frost**

**Geotechnical Engineering Office
Civil Engineering Department
HONG KONG August 1992**

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Cover: Oblique aerial view
of Yuen Long and Tin Shui Wai
in 1987

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Foreword

This report specifically relates to the Designated Area, which is the part of the northwest New Territories defined by the Hong Kong Geological Survey in 1987 as possibly underlain by marble. The geology of the area is depicted on twenty sheets of the 1:5 000 Geological Map Series HGP5A and HGP5B. The 1:20 000 Geological Map Sheets 2 (San Tin), 5 (Tsing Shan) and 6 (Yuen Long), and Memoir No. 3, Geology of the Western New Territories, also include information about the geology of the area covered by the report.

This report forms part of the published results of a programme of systematic geological mapping that began in 1982. This work has greatly enhanced our understanding of Hong Kong's stratigraphy and structure, and is establishing the geological database necessary for the continuing economic development of the Territory. The mapping programme is being undertaken by the Hong Kong Geological Survey, which is a section of the Planning Division of the GCO. The section was led by Mr P. J. Strange and the Division was under the direction of Dr A. D. Burnett during the mapping project reported here.

The 1:5 000 scale geological survey of the Designated Area was conducted by Dr D. V. Frost of the British Geological Survey under a consultancy agreement between Hong Kong Government and the Natural Environment Research Council, United Kingdom. Dr Frost was assisted by Ms N. J. Darigo, Mr D.K.M. Yuen and Mr A.H.P. Chau of Dames & Moore (Hong Kong), and the project was undertaken between May 1988 and April 1990. Prior to this, preliminary work in the Designated Area had been carried out by Mr K. W. Lai and Dr R. L. Langford of the Hong Kong Geological Survey.

The Survey benefitted from the co-operation of many organizations and individuals. The co-operation of Dr L. J. Endicott and staff of Dames & Moore (Hong Kong), Acer Freeman Fox Ltd, Binnie & Partners, Fugro (Hong Kong) Ltd, Maunsell Geotechnical Services Ltd, Ove Arup & Partners (Hong Kong) Ltd, and Electronic and Geophysical Services Ltd is gratefully acknowledged.

This report and the accompanying map sheets will be of interest and value to earth scientists, engineers, planners, developers and educationalists.

A. W. Malone

Principal Government Geotechnical Engineer
April 1992

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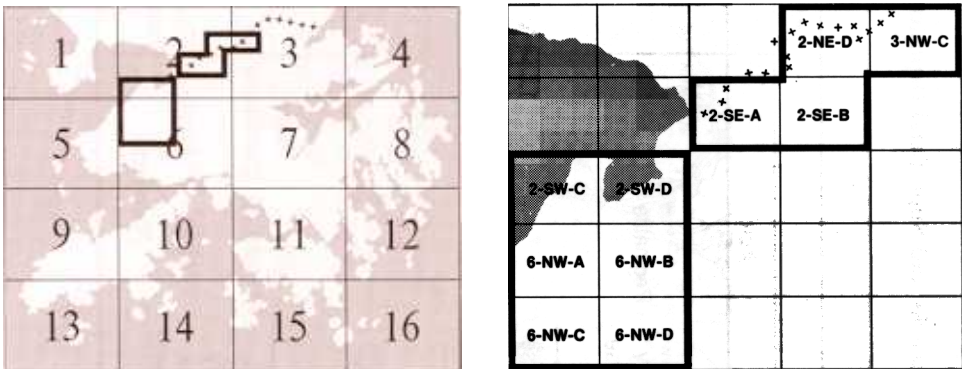
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Map and Report Series Notes

- This report describes the geology of part of the western New Territories and should be read in conjunction with the 1:5 000 Geological Maps 2-NE-D, 2-SW-C, 2-SW-D, 2-SE-A, 2-SE-B, 3-NW-C, 6-NW-A, 6-NW-B, 6-NW-C and 6-NW-D. The 1:20 000 Geological Map Sheets 2 (San Tin), 5 (Tsing Shan) and 6 (Yuen Long), and Memoir No. 3, Geology of the Western New Territories, also include relevant information on the geology of the Yuen Long area.
- The report forms one of a series that records the findings of the Hong Kong Geological Survey. An index of the 1:5 000 Geological Maps to which this report relates is shown below. This report specifically relates to the Designated Area (Figure 1), which is an area defined by the Hong Kong Geological Survey as an envelope within which the presence of a marble subcrop containing cavities was possible. The boundaries of the Designated Area were based upon the geological information available on 30 October 1987, comprising both borehole data from ground investigations as well as surface exposures. On completion of this present survey the envelope of marble subcrop was redefined, and following amendment of the Buildings Ordinance and Regulations is known as Scheduled Area No.2 (Figure 2).



- Onshore superficial deposits are not generally considered mappable if less than 2 m thick.
- Grid references are based on the Hong Kong 1980 Metric Grid as shown on the 1:5 000 Geological Maps. Eight-figure references indicate positions to the nearest 10 m, with Eastings followed by Northings, eg, 2672 2739. Six-figure references indicate positions to the nearest 100 m.
- Hong Kong Principal Datum (PD) is 1.2 m below Mean Sea Level and 0.15 m above Admiralty Chart Datum.
- Samples in the Territory-wide rock collection archived by the Hong Kong Geological Survey are prefixed HK followed by the serial number, eg, HK 2263.
- Boreholes are generally referred to by the drilling contractor's number followed by the Geotechnical Information Unit (GIU) accession number for the relevant ground investigation report, eg 1201D/03412. Boreholes with the prefix BGS were specifically drilled for the Hong Kong Geological Survey. The GIU is located in the Civil Engineering Library of the Civil Engineering Department and is maintained by the Geotechnical Engineering Office.
- The system used in this report for grain size description and classification is summarized in Table 1

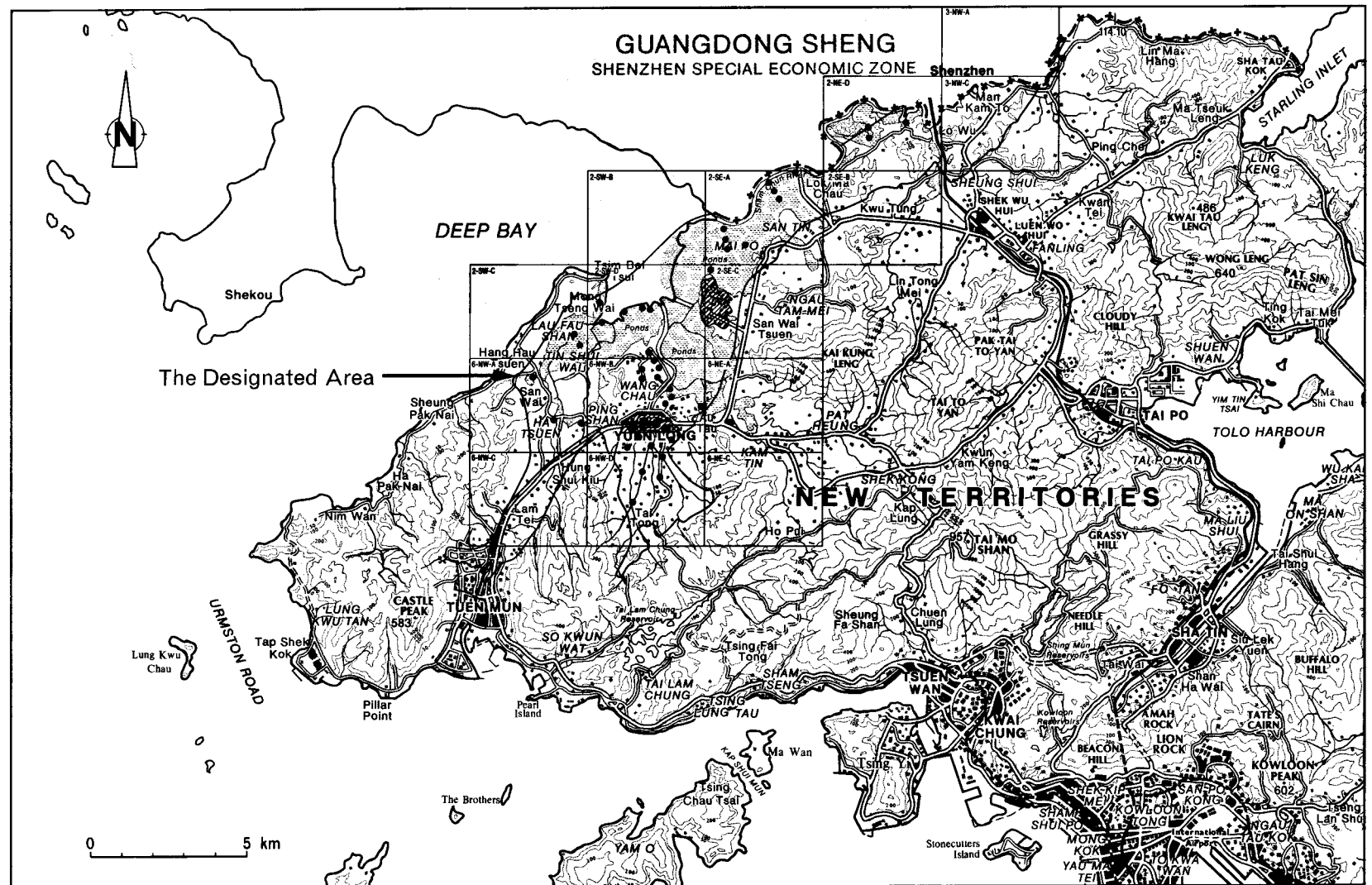


Figure 1 - Location Map of Original Designated Area, as at 30 October 1987

Figure 2 - The Redefined Designated Area in the Northwest New Territories (Scheduled Area No. 2)