

**GEO Technical Guidance Note No. 1 (TGN 1)
Technical Guidance Documents**

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1. **SCOPE**

- 1.1 This Technical Guidance Note (TGN) provides a list of technical guidance documents currently used by the Geotechnical Engineering Office (GEO) as de facto geotechnical standards in Hong Kong.
- 1.2 Any feedback on this TGN should be referred to Chief Geotechnical Engineer/Planning and Development of the GEO.

2. **TECHNICAL POLICY**

- 2.1 The technical guidance documents listed in Annex TGN 1A1 of this TGN are used by GEO as de facto geotechnical standards. These include Geotechnical Manuals, Geoguides, Geospecs, selected GEO Publications, selected GEO Reports, selected GEO Circulars, GEO TGNs and some publications issued by others, e.g. The Hong Kong Institution of Engineers. From time to time, Development Bureau Technical Circulars (Works) (TCWs), and Buildings Department Practice Notes for Authorised Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAPs) are also used to promulgate new/revised technical guidance. It is intended that TGNs will progressively be prepared to cover the technical guidance in geotechnical engineering given in TCWs, PNAPs and GEO Circulars, which will then be revised to give administrative procedures only.

3. **ANNEX**

- 3.1 TGN 1A1 - List of Technical Guidance Documents.

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LIST OF TECHNICAL GUIDANCE DOCUMENTS

The technical guidance documents in the following list may be revised from time to time, and unless otherwise stated, readers should refer to the latest edition of the documents.

1. DOCUMENTS ISSUED BY THE GEOTECHNICAL ENGINEERING OFFICE (GEO) (Notes 1, 2 and 3)

1.1 Geotechnical Manuals, Geoguides, Geospecs and Technical Guidance Notes (TGNs)

All prevailing documents of the above categories are used by the GEO as de facto geotechnical standards. New documents may be produced from time to time and the reader is advised to visit the website (<http://www.cedd.gov.hk>) of the Civil Engineering and Development Department (CEDD) for the latest list.

1.2 GEO Publications

GEO Publication No. 1/93	Review of Granular and Geotextile Filters
GEO Publication No. 1/2006	Foundation Design and Construction
GEO Publication No. 1/2007	Engineering Geological Practice in Hong Kong
GEO Publication No. 1/2009	Prescriptive Measures for Man-made Slopes and Retaining Walls
GEO Publication No. 1/2011	Technical Guidelines on Landscape Treatment for Slopes
GEO Publication No. 1/2023	Deep Excavation Design and Construction

1.3 GEO Reports

GEO Report No. 15	Assessment of Stability of Slopes Subjected to Blasting Vibration
GEO Report No. 29	Classification and Zoning of Marble Sites

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GEO Report No. 75	Landslides and Boulder Falls from Natural Terrain: Interim Risk Guidelines
GEO Report No. 104	Review of Natural Landslide Debris-Resisting Barrier Design
GEO Report No. 136	Guidelines on Safe Access for Slope Maintenance
GEO Report No. 138 (Second Edition)	Guidelines for Natural Terrain Hazard Studies
GEO Report No. 182	Use of Standardised Debris-resisting Barriers for Mitigation of Natural Terrain Landslide Hazards
GEO Report No. 210	Review of Slope Surface Drainage with Reference to Landslide Studies and Current Practice
GEO Report No. 270	Supplementary Technical Guidance on Design of Rigid Debris-resisting Barriers
GEO Report No. 359	Review of the Practice on Slope Surface Drainage Management

1.4 GEO Circulars

GEO Circular No. 24	Dangerous Hillside Orders and GEO Advisory Letters
GEO Circular No. 27	Geotechnical Control of Blasting
GEO Circular No. 28	Study and Mitigation of Natural Terrain Hazards
GEO Circular No. 31	Boulders
GEO Circular No. 33	Guidelines for Assessment of Old Masonry Retaining Walls in Geotechnical Studies and for Action to be Taken on Private Walls

2. DOCUMENTS ISSUED BY OTHERS

2.1 Development Bureau Technical Circulars (Works) (TCWs) ^(Note 4)

All TCWs listed in the Index Group of “Geotechnical” within the “Works Branch” Section on Development Bureau’s website (<http://www.devb.gov.hk/>) set up policy

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related to geotechnical studies and works. In particular the following circulars provide technical guidance and are used by the GEO as de facto geotechnical standards.

WBTC No. 25/93 Control of Visual Impact of Slopes

WBTC No. 17/2000 Improvement to the Appearance of Slopes

ETWB TC(W) No. 15/2005 Geotechnical Control for Tunnel Works

2.2 Buildings Department Practice Notes for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers (PNAPs) ^(Note 5)

PNAP APP-12 Prestressed Ground Anchors in Building Works

PNAP APP-15 Site Formation - Temporary or Permanent Filling Work (Appendix A)

PNAP APP-17 Rock Faces - Building (Planning) Regulations 27 & 47 (Appendix)

PNAP APP-18 Code of Practice for Foundations 2017

PNAP APP-22 Dewatering in Foundation and Basement Excavation Works

PNAP APP-25 Requirements for a Geotechnical Assessment at General Building Plan Stage - Building (Administration) Regulation 8(1)(ba)

PNAP APP-28 Requirements for Qualified Supervision of Site Formation Works, Excavation Works, Foundation Works on Sloping Ground, and Ground Investigation Works in the Scheduled Areas – Buildings Ordinance Section 17

PNAP APP-30 Geotechnical Control on Developments in Mid-levels Scheduled Area

PNAP APP-49 Site Investigation and Ground Investigation

PNAP APP-51 Monitoring and Maintenance of Horizontal Drains (Appendix A)

PNAP APP-54 Retaining Wall

PNAP APP-57 Requirements for an Excavation and Lateral Support Plan - Building (Administration) Regulation 8(1)(bc)

PNAP APP-61 Geotechnical Control on Developments in the Area Numbers 2 and 4 of the Scheduled Areas

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PNAP APP-63 Geoguide 1 Guide to Retaining Wall Design

PNAP APP-72 Control of Blasting

PNAP APP-76 Keeping Buried Services out of Slopes

PNAP APP-109 Geotechnical Manual for Slopes Guidance on Interpretation and Updating

PNAP APP-115 Performance Review – Item 6(g)(ii) in Column B, Section 17(1) of the Buildings Ordinance

PNAP APP-135 Quality Supervision of Soil Nailing Works

PNAP APP-137 Ground-borne Vibrations and Ground Settlements Arising from Pile Driving and Similar Operations

2.3 Publications of the Hong Kong Institution of Engineers

Soil Nails in Loose Fill Slopes: A Preliminary Study (Final Report), Geotechnical Division, Hong Kong Institution of Engineers, Jan 2003.

Design of Soil Nails for Upgrading Loose Fill Slopes. Geotechnical Engineering Office and Hong Kong Institution of Engineers (Geotechnical Division), Oct 2011, 96 p.

2.4 Other References

Buildings Ordinance and Building Regulations - Chapter 123, Hong Kong SAR Government.

General Specification for Civil Engineering Works (2020 Edition) and issued Amendments, CEDD, Hong Kong SAR Government.

Code of Practice on Monitoring and Maintenance of Water-Carrying Services Affecting Slopes (2nd Edition), Environment, Transport and Works Bureau, Hong Kong SAR Government ^(Note 6).

Code of Practice for Foundations, Buildings Department, Hong Kong SAR Government.

Guide to Trench Excavations (Shoring Support and Drainage Measures), Highways Department and Civil Engineering Department, Hong Kong SAR Government.

**Geotechnical Engineering Office, Civil Engineering and Development Department
The Government of the Hong Kong Special Administrative Region**

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Notes:

- (1) Geotechnical Manuals, Geoguides, Geospecs, TGNs, GEO Publications and GEO Reports can be viewed/downloaded at the CEDD's website <http://www.cedd.gov.hk> on the Internet under "Publications".
- (2) GEO internal reports and GEO Circulars are available for inspection in the Civil Engineering Library, CEDD, at LG1, Civil Engineering and Development Building, 101 Princess Margaret Road, Homantin, Kowloon.
- (3) TCWs can be viewed/downloaded at the Development Bureau's website <http://www.devb.gov.hk> on the Internet under "Technical Circulars".
- (4) PNAPs can be viewed/downloaded at the Buildings Department's website <http://www.bd.gov.hk> on the Internet. These are updated from time to time with the PNAP number retained and a new date of issue added. Users are advised to check the website for the most up-to-date versions.
- (5) The Code of Practice on Monitoring and Maintenance of Water-Carrying Services Affecting Slopes can be viewed/downloaded at the Development Bureau's website <http://www.devb.gov.hk> under "Publications" of "Publications and Press Releases".