

**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**

Buildings Ordinance Section 17 explicitly empowers the Building Authority to require ‘qualified supervision’ of certain building works when giving his approval of plans or consent to the commencement of the works.

2. The principles used by the Building Authority in assessing the need for qualified supervision of building works with significant geotechnical content, including site formation works, excavation works, foundation works on sloping ground and ground investigation works in the Scheduled Areas, are as follows :

Category (I) periodic inspections by a qualified geotechnical engineer who was involved in the preparation of the geotechnical content of the submission

This category of qualified supervision applies to sites where the results of stability analyses or ground movement calculations are sensitive to variations in the geotechnical design assumptions. According to B(A)R 8(1)(bb), (bc) etc, the geotechnical design assumptions must be checked on site as works proceed. This is the first duty of the geotechnical engineer providing the site supervision. Having checked the geotechnical design assumptions, the need for modifications to the design has then to be judged by the geotechnical engineer.

Some types of design assumptions which may be critical for stability, and which are often found by expert inspection on site to be in error, are :

- (a) the geological model (eg variation in weathering may affect the penetration depth of steel sheet piles); and
- (b) the groundwater regime (eg occurrence of a perched water table may impair stability).

/Category (II)

Category (II) periodic inspections by a senior qualified geotechnical engineer who was responsible for the preparation of the geotechnical content of the submission

This category of qualified supervision is to be imposed for sites of high sensitivity (eg excavation sites adjoining old buildings with shallow foundations). The personal attention of the qualified supervisor is needed to recognise, evaluate and communicate concerns to the authorized person and the client at a senior level.

Category (III) full time supervision by a suitably experienced person

This category of qualified supervision applies to sites where day-to-day checks on compliance with specifications or working procedures are necessary. It is used for works which depend for their success and safety on a high standard of workmanship and materials.

Some examples are works involving ground anchors, compaction of fill slopes, and excavation and lateral support works involving complicated working procedures.

3. A qualified supervision package may be provided using a combination of Categories (I), (II) and (III) above. In any case, details of the individuals who are to carry out the supervision are to be submitted to the Building Authority for agreement.

4. The following provides guidance on the suitability of persons nominated for compliance with qualified supervision requirements :

Category (I) - Registered Professional Engineer (Geotechnical) or equivalent from the firm which prepared the geotechnical content of the submission.

Category (II) - Registered Professional Engineer (Geotechnical) who is a partner/director or equivalent of the firm which prepared the geotechnical content of the submission.

Category (III) - Suitably experienced qualified or graduate engineer/geologist or technical inspector/works supervisor, depending on the type of works.

/5. Registration

5. Registered Professional Engineer (Geotechnical) is not a pre-requisite for acceptance of persons nominated for Category (I) and Category (II) qualified supervision. Each case should be considered on its own merits. For sites where geotechnical problems are of a minor nature and the consequences of failure would be insignificant, the Building Authority will normally not impose the requirement for qualified geotechnical supervision.

6. For certain sites, geotechnical supervisory requirements have been included in the lease or land title document, and on application the sectional Chief Building Surveyor will advise whether this is the case for a specific site.

(CHOI Yu-leuk)
Building Authority

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This update December 1997 (GGE, AD/SE) - Supervision levels renamed

Index under : BO s17 - Requirement for Qualified Supervision of Building
Works with Geotechnical Content
Supervision - Building Works with Geotechnical Content