

Site FormationTemporary or Permanent Filling Work

Authorised Persons and Registered Structural Engineers will be aware of the potentially disastrous consequences of flowslides of loosely placed fill, yet examples of poor compaction are still to be found on or adjacent to construction sites.

2. In future, site formation plans must indicate the location of all filling whether temporary or permanent. Where in the opinion of the Building Authority the failure of a proposed fill arising from private building works could threaten the public, the Building Authority will require the Authorised Person/Registered Structural Engineer to submit for approval to the Buildings Ordinance Office suitable drawings of the filling work which should contain notes to show that the standards laid down in the Appendix to this Practice Note will be complied with.

3. During filling work and thereafter until the Occupation Permit is granted, the authorised person should maintain for inspection by officers of the Buildings Ordinance Office:

- (a) 'As-built' plans and sections of the work showing its relation to existing and proposed buildings.
- (b) Complete records of insitu density tests and laboratory compaction tests of the fill all in accordance with the Appendix.

4. The issue of a temporary occupation permit or occupation permit will normally be refused under Section 21(6)(a) of the Buildings Ordinance if temporary fills have not been removed from site or if the authorised person is unable to demonstrate to the satisfaction of the Building Authority that permanent fills have been formed in compliance with the Appendix.

5. The Buildings Ordinance Office is reviewing filling work on slopes now under construction and it would greatly assist this review if you would write to the Government Geotechnical Engineer in the Buildings Ordinance Office informing him of the address, lot number and B.O.O. reference where filling work both temporary and permanent is in progress (or has been carried out on a site where an occupation permit has yet to be granted) under your supervision.

6. Where the Building Authority becomes aware of filling works which pose a potential threat, action may be taken under Section 24A of the Buildings Ordinance to ensure that the threat is removed.

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Compaction of Fill

- (a) The insitu field densities of compacted materials forming the fill shall be not less than 95% of the maximum dry density.
- (b) The maximum dry density and optimum moisture content shall be determined in accordance with B.S. 1377: 1975 Test No. 12. Each soil type shall be tested when first used and thereafter at the same time as every set of field density tests. Records shall be kept identifying on plan drawings the soil type and plan location and elevation PD in the works of each test together with the maximum dry density and optimum moisture content. Graphs of dry density VS moisture content, laboratory test record sheets and a complete soil description are to be kept in a companion folder.
- (c) The insitu field density and moisture content shall be determined in accordance with B.S. 1377: 1975 Test No. 15 (sand replacement) or with ASTM D-2167 63T (densometer) to determine the degree of compaction achieved. Three determinations shall be made for every 800 sq. m. or part thereof in each layer placed. Records shall be kept identifying on plan drawings the soil type and plan location and elevation PD in the works of each test together with dry density of soil tested, moisture content and relative compaction achieved (%). The field sheets and calculation sheets and a complete soil description are to be kept in a companion folder.
- (d) Moisture content determination in connection with B.S. compaction tests shall be carried out by means of a drying-oven. In order to expedite results, moisture contents for field density tests may be determined by use of the rapid moisture tester using carbide. This tester shall not be used until it has been calibrated against moisture content tests carried out in a drying-oven. Records shall be kept of the calibration tests and calibration charts.
- (e) All tests shall be carried out by the authorised person, registered structural engineer or by an independent testing agency.