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SECTION 51 EXCAVATIONS

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SECTION 51

EXCAVATIONS

Method of excavation **51.001** Excavations shall be carried out to a method accepted by the Employer's Representative. Methods of excavation shall not reduce the stability of any adjacent earthworks, railway track or structures nor permit the accumulation of water.

Excavations for cuttings **51.002** Excavations for cuttings shall be to the profile shown on the Contract Drawings to a tolerance of ± 20 mm for the subgrade, and ± 50 mm for the side slopes. Pockets of soft material and loose rock shall be removed and replaced with Acceptable material compacted in accordance with Section 52 (Earthworks).

Excavations shall not be taken down below a level of 300 mm above the finished subgrade or surface of a cutting slope, until such time as the finished surface can, in the opinion of the Employer's Representative, be exposed without risk of scour or erosion from any cause, and all permanent formation drainage has been completed and is in working order.

Where the excavation reveals a combination of Acceptable and Unacceptable materials, the excavation shall be carried out in such a manner that the Acceptable materials can be separated for use in the Works. The Contractor shall make his own arrangements for stockpiling both Acceptable and Unacceptable materials and shall check that the stockpiling of such materials does not adversely affect the stability of excavations, areas of fill, or existing structures.

Soils containing clay and chalk, and soft chalk together with any other materials or soils of a like nature, shall not be finally trimmed and exposed in wet weather. After completion of such trimming, any blanketing, ballasting, drainage, waterproofing or soiling, shall be carried out within 12 hours.

The finished surface of cutting excavations shall comply with the requirements for the finished subgrade specified in Section 52 (Earthworks).

On completion of the excavations for the cuttings, the side slopes shall be covered with topsoil in accordance with Section 52 (Earthworks).

Restrictions on excavating in chalk **51.003** Restrictions that apply to the excavation of chalk are detailed in Appendix 51/1.

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Where temporary instability occurs in chalk due to excess working by plant or to inclement weather, the Contractor shall delay further deposition of material until the chalk has recovered sufficient strength for work to proceed. The Contractor shall allow for waiting periods that may be necessary during earthworks on chalk.

The Contractor shall take all necessary measures to limit the creation of dust during earthworks operations in chalk. This shall include covering of transported chalk, watering of earthworks and the use of haul roads constructed from alternative materials.

Care shall be taken that excavated chalk to be re-used on the Site is shall not be contaminated with clay, silt or other cohesive materials. Where chalk becomes mixed with other materials, the mixed material shall only be permitted for use as fill to landscape areas.

Excavations for foundations

51.004

Pits or trenches for foundations shall be taken out in lengths and widths agreed by the Employer's Representative. Any voids remaining between the sides of concrete bases and solid ground shall either be carefully filled in with adequately compacted acceptable granular fill or, if the filling is to transmit passive resistance or other lateral forces, with concrete.

The sides of all excavations for foundations etc. shall be upheld and all Temporary Works necessary to maintain the stability of the sides of the excavations shall be provided.

Bases of excavations shall be carefully levelled and, if necessary, stepped and benched horizontally. Bases of excavations shall not be finally trimmed in wet weather. Pockets of soft material shall be carefully removed and the cavities, including any fissures, filled with concrete or grout, as appropriate and agreed by the Employer's Representative.

Excavations for underpinning

51.005

Underpinning of existing structures shall be carried out in short intermittent sections, each of which shall be capable of bearing the designed loading before any adjacent work is commenced. Details of the methods proposed to be adopted for the underpinning shall be submitted for the consent of the Employer's Representative and no underpinning works shall be commenced until such consent has been obtained.

Excavations for services

51.006

The route of all trenches for services, where not specified on the Contract Drawings, shall be agreed by the Employer's Representative prior to any excavation commencing.