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Specification for topsoil

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Contents

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This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 26, an inside back cover and a back cover.

Foreword

Publishing information

This British Standard is published by BSI Standards Limited, under licence from The British Standards Institution, and came into effect on 30 April 2015. It was prepared by Technical Committee AW/20, *Topsoil, other growing media and turf*. A list of organizations represented on this committee can be obtained on request to its secretary.

Supersession

This British Standard supersedes BS 3882:2007, which is withdrawn.

Relationship with other publications

This British Standard is intended to complement BS 8601 which specifies subsoil.

Information about this document

This is a full revision of the standard to bring it up to date and to make it complementary to the new British Standard for subsoil, BS 8601.

Test laboratory accreditation. Users of this British Standard are advised to consider the desirability of selecting test laboratories that are accredited to BS EN ISO/IEC 17025 by a national or international accreditation body.

Use of this document

It has been assumed in the preparation of this British Standard that the execution of its provisions will be entrusted to appropriately qualified and experienced people, for whose use it has been produced.

Hazard warnings

WARNING. This British Standard calls for the use of substances and/or procedures that can be injurious to health if adequate precautions are not taken. It refers only to technical suitability and does not absolve the user from legal obligations relating to health and safety at any stage.

Presentational conventions

The provisions of this standard are presented in roman (i.e. upright) type. Its requirements are expressed in sentences in which the principal auxiliary verb is "shall".

Commentary, explanation and general informative material is presented in smaller italic type, and does not constitute a normative element.

Requirements in this standard are drafted in accordance with *Rules for the structure and drafting of UK standards*, subclause **J.1.1**, which states, "Requirements should be expressed using wording such as: 'When tested as described in Annex A, the product shall ...'". This means that only those products that are capable of passing the specified test will be deemed to conform to this standard.

Contractual and legal considerations

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

Particular attention is drawn to:

- Schedule 9 of the Wildlife and Countryside Act 1981 [1]
- The Environmental Protection Act 1990 (EPA) [2]
- The National Planning Policy Framework (NPPF) [3]
- Contaminated Land Exposure Assessment (CLEA) model (EA/DEFRA:2009) Soil Guideline Values [4]
- Chartered Institute of Environmental Health (CIEH)/Land Quality Management (LQM) Generic assessment criteria for human health risk assessment (2nd Edition, 2009) [5]
- The Waste Management Licensing Regulations 1994 (as amended) [6]
- Definition of waste: Development industry code of practice (Guidance Bulletin GB 03, CL:AIRE, 2011) [7]

Introduction

Topsoil is an important component of most landscape projects [such as gardens, civil engineering, sustainable drainage systems (SuDS) and reclamation sites], where it provides the function of supporting the growth of vegetation. It does this by providing an anchorage for plant roots, by slowly releasing nutrients, by providing oxygen, by draining excess water whilst delaying/retarding runoff and by retaining moisture to sustain plant growth during dry periods. The underlying subsoil or other substrate can provide additional rooting depth, moisture storage and drainage.

Topsoil can be both naturally occurring and manufactured. Naturally occurring topsoil is the product of dynamic chemical, physical and biological processes acting on weathered mineral matter. Topsoil can also be manufactured by combining organic matter, mineral material with additional lime and/or fertilizer, as appropriate, to provide a medium that (with the same chemical, physical and biological processes) can develop properties similar to naturally-occurring topsoil.

During natural soil formation, organic matter (typically from decaying vegetation) becomes incorporated by biological activity into the surface layers to form a (characteristically) darkened topsoil over a lighter subsoil, the latter typically of lower organic content and fertility. In many places this process has become modified by human intervention through cultivation and/or by the addition of fertilizer and organic materials.

Topsoil is a dynamic and fragile material, which when managed appropriately, fulfils its function, but is easily damaged by mishandling. It is important that topsoil is lifted, transported, stored and spread carefully over a non-compact substrate. Damage during handling can result in a rapid deterioration in the functions topsoil provides.

NOTE 1 Transporting soil involves mechanical handling, i.e. excavation, loading, transport and distribution on site. Not all naturally occurring topsoils would survive such handling and retain the ability to develop into an acceptable soil in a reasonable time at the receiving site, even though in their undisturbed, naturally occurring condition they might be very productive and capable of sustaining plant growth over long periods of time. For example, clay textured soil could be very productive in situ but its structure might suffer damage during stripping (or other handling activities) that could only be reversed by years of careful management.

NOTE 2 In the context of soil profile construction, the subsoil is also an important medium for root growth, since it provides reserves of water and available plant nutrients and mechanical anchorage, and for SuDS.

1 Scope

This British Standard specifies requirements for the classification and composition of natural and manufactured topsoils that are moved or traded for creating soil profiles intended to support plant growth. The standard is not applicable to subsoil, or to topsoil that is to remain in situ, however, it is not intended to preclude the use of topsoil that is already on site and suitable for its intended purpose. This standard specifies requirements for multipurpose topsoil, which is fit for the majority of needs, and also specific purpose topsoils that have low fertility or are acidic or calcareous, for specialist use where low fertility or acidic or calcareous soil profiles are required. It also specifies requirements for sampling and analysis of topsoil.

NOTE Recommendations for the stripping, handling and trafficking of topsoil are given in Annex A.