

BS 8545:2014



BSI Standards Publication

**Trees: from nursery to
independence in the
landscape –
Recommendations**

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Contents

Foreword	<i>iv</i>
Introduction	1
1 Scope	1
2 Normative references	2
3 Terms and definitions	2
4 General process	5
5 Policy and strategy	6
5.1 General	6
5.2 General recommendations on policy and strategy	6
5.3 Planting objectives and desired outcomes	7
5.4 Statutory controls and relevant policy	7
5.5 Environmental considerations	7
5.6 Additional factors and constraints	8
6 Site evaluation and constraints assessment	8
6.1 Process flowchart	8
6.2 General recommendations for site evaluation and constraints assessment	8
6.3 Ground assessment	9
6.4 Macro and micro climatic conditions	9
6.5 Existing features including vegetation	10
7 Species selection	10
7.1 Process flowchart	10
7.2 General recommendations for species selection	10
7.3 Characteristics of different species and cultivars	11
7.4 Nomenclature	12
7.5 Existing tree population of the landscape into which young trees are planted	12
8 Nursery production and procurement	12
8.1 Process flowchart	12
8.2 General recommendations for nursery production and procurement	12
8.3 Crown and stem development	13
8.4 Root system development and management	14
8.5 Young tree quality assessment and procurement	15
8.6 Base security	15
9 Handling and storage	15
9.1 Process flowchart	15
9.2 Lifting on the nursery	15
9.3 Movement on the nursery after lifting and before dispatch	16
9.4 Loading	17
9.5 Unloading and temporary storage	17
10 Planting	18
10.1 Process flowchart	18
10.2 Considerations below ground	18
10.3 Considerations above ground	19
10.4 Check list for trees prior to planting	20
10.5 Planting the tree	20
11 Post-planting management and maintenance	23
11.1 Process flowchart	23
11.2 General recommendations for post-planting management and maintenance	23
11.3 Irrigation	23

- 11.4 Formative pruning 24
 11.5 Routine assessment and ongoing maintenance 24

Annexes

- Annex A (informative) Further guidance on policy and strategy 26
 Annex B (informative) Further guidance on site evaluation and constraints assessment 27
 Annex C (informative) Further guidance on species selection 34
 Annex D (informative) Further guidance on nursery production and procurement 35
 Annex E (informative) Further guidance on handling and storage 54
 Annex F (informative) Further guidance on planting 55
 Annex G (informative) Further guidance on post-planting management and maintenance 70

- Bibliography 75

List of figures

- Figure 1 – General process for new planting projects 5
 Figure 2 – Process flowchart for policy and strategy 6
 Figure 3 – Process flowchart for site evaluation and constraints assessment 9
 Figure 4 – Process flowchart for species selection 11
 Figure 5 – Process flowchart for nursery production and procurement 13
 Figure 6 – Process flowchart for handling and storage 15
 Figure 7 – Process flowchart for planting 18
 Figure 8 – Process flowchart for post-planting management and maintenance 23
 Figure B.1 – Soil characteristics 28
 Figure B.2 – Soil texture triangle 29
 Figure B.3 – Determination of soil texture by manual texture test 30
 Figure B.4 – Influence of soil pH on nutrient availability 31
 Figure B.5 – Impacts of soil compaction on soil characteristics 32
 Figure D.1 – Excurrent and decurrent trees 36
 Figure D.2 – Height to stem diameter ratio and stem taper 37
 Figure D.3 – Sizes of young tree nursery stock 38
 Figure D.4 – Poor bud graft union 39
 Figure D.5 – Bend or bud union 39
 Figure D.6 – Lateral branch subordination 40
 Figure D.7 – Lateral branch pruning on the nursery 42
 Figure D.8 – Typical bare root systems 46
 Figure D.9 – Principles involved in transplanting or undercutting trees to be rootballed 48
 Figure D.10 – Effects of not transplanting or undercutting trees to be rootballed 49
 Figure D.11 – Mounding and deep planting 51
 Figure D.12 – Root circling and subsequent root girdling in containers 52
 Figure D.13 – Visual assessment of poor health in young trees 53
 Figure F.1 – Tree pit design: Planting in grass 56
 Figure F.2 – Tree pit design: Planting in hard surfaces 57
 Figure F.3 – Tree pit design: Options for planting pit where site constraints are non-existent or minimal 58
 Figure F.4 – Tree pit design: Pit with square sides inside circular area excavated in grass 59
 Figure F.5 – Tree pit design: Tree pit modifications in response to site constraints and design necessities 60
 Figure F.6 – Impact of stake and tie height on position of stem thickening caused by lateral movement 64
 Figure F.7 – Types of damage caused by failure to remove tree protection 67
 Figure F.8 – Factors involved in tree planting 68
 Figure F.9 – Deep roots 69
 Figure G.1 – Formative pruning techniques 73

List of tables

Table 1 – Check list for trees prior to acceptance of delivery to site and planting 21

Table B.1 – Assessment of drainage using percolation test 32

Table D.1 – Approximate height and clear stem of trees 36

Table D.2 – Advantages and disadvantages of different nursery production systems 43

Table D.3 – Root spread for bare root stock 45

Table D.4 – Container sizes 45

Table D.5 – Relationship between tree size, size of rootball and number of times transplanted/undercut on the nursery 50

Table F.1 – Advantages and disadvantages of different tree pit surfacing materials 66

Table G.1 – Available water in different soil types at field capacity 71

Summary of pages

This document comprises a front cover, an inside front cover, pages i to vi, pages 1 to 80, 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 28 February 2014. It was prepared by Technical Committee B/213, *Trees and tree work*. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

BS 8545 is a new British Standard and is intended to assist people involved in planning, designing, resourcing, producing, planting and managing new trees in the landscape.

The purpose of this standard is to explain how new trees can be successfully grown and planted so that they flourish in the landscape without extensive maintenance. The standard promotes the principle that successful new tree planting relies on the integration of careful design, nursery production and planting site management, into one continuous process. All parts of the process are important and need careful consideration if new trees are to successfully achieve independence in the landscape.

The large amounts of research and anecdotal evidence on good practice throughout the breadth of preparing, planting and maintaining new trees, make it impossible to comprehensively list all that information within this standard. Instead, the standard seeks to distil the best of that information into discrete recommendations that summarize the process. It is structured so that users can access an overview of all parts of the process quickly and easily through the flowcharts and the body text. This is supplemented by more detailed discussion in the annexes, which is supported by technical referencing of relevant scientific research. The intention is for users to be able to easily identify the clauses that are relevant to their needs and, if necessary, then drill down into more detail in the annexes, and follow that up with accessible research references, if even more explanation is required.

The standard does not seek to be prescriptive or to provide a simple solution to cover all eventualities, recognizing that there is no single route to achieve its ends; but rather traces a series of good practice options, providing guidance and enabling an optimal route to be planned, defined by individual site constraints. It is for those involved in the process of achieving independence for young trees in the landscape to decide on which of the options outlined in the body of this standard are appropriate to their own requirements. These options will be conditioned by design and strategic intentions, individual site constraints and requirements, nursery availability and quality of tree stock, budget size and maintenance schedules.

This standard recognizes that each site is different, and its successful use depends on the depth and integrity of individual site assessment. Additionally, it recognizes that there is a wide range of experience, credentials and local knowledge of individual users, which could affect how recommendations are implemented. For example, local knowledge of, and familiarity with, the site conditions (as with the retrofitting of street trees) could dispense with the need for detailed site investigations. Conversely, designers working at a new location would clearly need detailed investigations to fill in the gaps in their knowledge and inform the decision-making process.

In most situations, a great diversity of information needs to be accumulated to inform the decision-making process, which requires skill, knowledge and experience to transform ideas on paper into successful results on the ground. This is an intellectual process that involves weighing the accumulated information to arrive at a balanced decision that has properly and fully accounted for all the relevant influencing factors. This process is technically difficult and intellectually challenging, but is absolutely necessary to consistently successfully deliver new trees that are independent in the landscape.

This standard recognizes that the word “establishment” can be taken as meaning the tree is present and alive, but those physical characteristics have very little bearing on whether the tree will survive and flourish. Indeed, trees can stay alive for decades, but remain moribund and make no significant contribution to the landscape. An obvious objective of all new planting is to reach the position as quickly as possible where a tree is healthy and has every prospect of achieving its full potential to deliver the benefits it was planted for, without any excessive or abnormal management input. It is for this reason that the phrase “independence in the landscape” is preferred in this standard to the word “establishment”.

Use of this document

This British Standard takes the form of guidance and recommendations. It should not be quoted as if it was a specification and particular care should be taken to ensure that claims of compliance are not misleading.

Any user claiming compliance with this British Standard is expected to be able to justify any course of action that deviates from its recommendations.

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.

Presentational conventions

The provisions in this standard are presented in roman (i.e. upright) type. Its recommendations are expressed in sentences in which the principal auxiliary verb is “should”.

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

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.

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Introduction

It has been a widely recognized fact that a significant proportion of newly planted trees fail to survive to maturity. The *Trees in towns II* report [1] commissioned by the Department of Communities and Local Government highlighted that as much as 25% of all planting undertaken in the public sector actually fails. Although there has not been any comparable survey undertaken in the private sector, anecdotal evidence indicates that the failure rates are similar.

It is difficult to pinpoint the reason why the failure rate of new planting is so high, but one contributory factor is the present disjointed approach to production and planting. This standard seeks to define all the parts of the process as a continuous and joined-up sequence, rather than isolated parts that have no tangible connections.

An important objective of this standard is to assist practitioners in making balanced and informed tree planting decisions. Ideally, all newly planted trees need to be able to grow with vigour appropriate to the species and situation, in good health, and with minimal nuisance to achieve the desired planting objectives.

The standard sets out good practice in strategic and policy formation and then follows the whole transplanting process through to independence in the landscape, under the following clause headings:

- policy and strategy;
- site evaluation and constraints assessment;
- species selection;
- nursery production and procurement;
- handling and storage;
- planting;
- post-planting management and maintenance.

These clause headings are intended to be considered consecutively as illustrated in the flowchart in figure 1 (see Clause 4). This flowchart cascades down to a separate flowchart for each of the separate clause headings (see Clause 5 to Clause 11). Each of these individual flowcharts is immediately followed by a series of recommendations relating to that particular subject. Each clause is cross-referenced to a series of annexes which explores each subject in greater depth, with figures and tables to add further clarification.

Each clause in this standard can be read independently from the others, but the combined clauses outline a process which is continuous. The whole process is only as strong as its weakest link; every part of the process needs to be given equal weight.

1 Scope

This British Standard gives recommendations for transplanting young trees successfully from the nursery, through to achieving their eventual independence in the landscape, specifically covering the issues of planning, design, production, planting and management.

This British Standard applies to trees where a distinct crown has been prepared in the nursery. It does not apply to whips, transplants and seedlings, or to other woody material.

NOTE Although this standard does not give specific recommendations for other woody material, many of its provisions can be applied to such material, e.g. to shrubs.