

Glossary of building and civil engineering terms —

Part 2: Civil engineering —

**Section 2.2: Substructures, earthworks, foundations,
tunnels —**

**Subsection 2.2.2: Substructures and
foundations**

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Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee B/500, Basic data, upon which the following bodies were represented:

- Association of Building Engineers
- Construction Confederation
- Department of the Environment, Transport and the Regions — Construction Directorate
- Institution of Civil Engineers
- Institution of Structural Engineers
- Meteorological Office
- National Building Specification Ltd
- National Council of Building Material Producers
- National House-building Council

The following bodies were also represented in the drafting of the standard, through Subcommittee B/500/4, Terminology:

- Brick Development Association
- British Waterways Board
- Clay Pipe Development Association Ltd
- Department of the Environment, Transport and the Regions — Construction Directorate
- Department of the Environment, Transport and the Regions — Central Transport Group
- Federation of Plastering and Drywall Contractors
- Glass and Glazing Federation
- Guild of Architectural Ironmongers
- Gypsum Products Development Association
- National Council of Building Material Producers
- Royal Institute of British Architects
- Royal Institution of Chartered Surveyors
- Timber Trade Federation
- Water UK

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Foreword

This subsection of part 2 of BS 6100 has been prepared by Technical Committee B/500. It supersedes BS 6100-2.2.2:1990 which is withdrawn. This subsection covers that branch of civil engineering concerned with the planning, design and construction of earthworks and works below ground level.

As far as possible the definitions in this subsection of BS 6100 are technically equivalent to those in BS 8004. However, it has been necessary to change some terms and definitions to ensure that they are acceptable for general use and are in accordance with current practice.

The need for consistency throughout the glossary has also involved changes in type and format to terms and definitions included in other existing British Standards.

The general introduction to and explanation of this glossary is given in BS 6100-0, which itemizes the parts and sections into which this glossary is divided and provides a general alphabetical index of all the terms in the sections and subsections already published. Those using individual sections of this glossary are urged to consult BS 6100-0 when doing so.

The other sections of this part are as follows:

- 2.1 *Structural design and elements*;
- 2.3 *Superstructures — Bridges — Large span structures*;
- 2.4 *Highway and railway engineering*;
- 2.5 *Hydraulic engineering and construction work*;
- 2.6 *Natural waters — Inland. Coastal — Marine*;
- 2.7 *Public health — Environmental engineering*;
- 2.8 *Pipelines — Ducts*.

The other subsections in this section are as follows:

- 2.2.1 *Earthworks*;
- 2.2.3 *Tunnels*.

Terms are listed alphabetically in the index and are referred to by numbers which are found against the term in the body of the subsection. They are arranged in a classified order, each term having an individual number consisting of seven digits in two parts, the first of three digits, the second of four. The first three digits represent the number of the part, section and subsection. The fourth digit represents the group of terms, the fifth digit represents the subgroup of terms (in this case, the fifth digit is 0 as there is no subdivision into subgroups) and the last two digits represent the place within the subgroup.

Alternative terms are given in medium type below the preferred term with their status indicated, e.g. “deprecated”. These terms are not individually numbered, but are included in the index with a reference to the preferred term. Terms of more than one word, e.g. “cohesive soil”, are written in a direct style, not as, e.g. “soil, cohesive”. The inverted term is included in the index with a reference to the direct term.

It is to be noted that, while this subsection deals with the more basic terms connected with civil engineering, many of the head terms relating to more specific aspects will occur only in the other, relevant sections. Conversely it has been considered necessary to repeat in this subsection certain terms from BS 6100-1.0. Where this occurs, the definitions of such terms are preceded by an asterisk (*).

Bold words in definitions indicate terms that are defined elsewhere in this subsection.

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Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 11 and a back cover.

No.	Term	Definition
222 1 Base terms		
222 1001	foundation	*construction to transmit forces to the supporting ground
222 1002	substructure	*part of a structure wholly or mainly below the level of the adjoining ground or a given level
222 1003	pile	*slender structural member substantially underground intended to transmit forces into loadbearing strata below the surface of the ground
222 1004	piled foundation	foundation that incorporates one or more piles
222 2 Substructures: general		
222 2001	air deck	airtight platform in a caisson or shaft for compressed air working
222 2002	air lock	*enclosed space with two doors, situated between two environments with different air conditions, that makes it possible to pass from one environment to the other without significant disturbance to either
		NOTE In tunnels and caissons the expression “different air conditions” refers to different air pressures.
222 2003	Gowering lock	vertical air lock that has separate chambers for materials and personnel
222 2004	caisson	hollow structure with substantial impervious walls that comprises one or more cells and is sunk through ground or water to form the permanent shell of a deep foundation
222 2005	compressed air caisson pneumatic caisson (deprecated)	caisson , provided with an air deck and air lock , that forms a sealed but accessible chamber, in which air can be maintained above atmospheric pressure to exclude water and within which operatives can excavate to facilitate sinking and carry out other construction work
222 2006	box caisson	caisson that is closed at the bottom and open to the atmosphere at the top
222 2007	open caisson cylinder (deprecated)	caisson that is open both at the top and at the bottom
222 2008	choker ring	bottom section of a caisson including its cutting edge, of larger external horizontal dimensions than the remainder of the caisson
222 2009	blow out	sudden major escape of compressed air from a tunnel or caisson , often accompanied by an in-rush of soil and water

* This term and its definition are repeated from BS 6100-1.0.