

BRITISH STANDARD

Spatial datasets for geographical referencing –

Part 1: Specification for a street gazetter

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Contents

Foreword *ii*

Introduction *iv*

1	Scope	1
2	Normative references	1
3	Terms and definitions	1
4	Street gazetteer requirements	3
5	Gazetteer metadata	5
6	Street records	7
7	Elementary street unit records	12
8	Data quality	14

Annex

Annex A (normative)	Conformance	16
Annex B (normative)	UML model	17
Annex C (informative)	Recommended coding schemes	18
Annex D (informative)	Example street gazetteer metadata	19
Annex E (informative)	Example street data	20
Annex F (informative)	Additional information relating to Public Rights of Way	20
Annex G (informative)	Example elementary street unit data	32

Bibliography 33

List of figures

Figure 1 – Street gazetteer model	4
Figure B.1 – UML model for a street gazetteer	17
Figure F.1 – UML model for Public Rights of Way	22

List of tables

Table 1 – Gazetteer metadata	7
Table 2 – Attributes of street	9
Table 3 – Descriptive identifier	10
Table 4 – Record types	11
Table 5 – Attributes of elementary street unit	14
Table C.1 – Street classification codes	18
Table C.2 – State codes	19
Table C.3 – Language codes	19
Table F.1 – Attributes of PROW	24
Table F.2 – PROW status code	24
Table F.3 – Attributes of PROW link	26
Table F.4 – Attributes of link geometry	27
Table F.5 – Link type code	27
Table F.6 – Link surface code	28
Table F.7 – Attributes of PROW furniture	29
Table F.8 – Furniture description codes	29
Table F.9 – Attributes of promoted route	30
Table F.10 – Attributes of promoted route element	31

Summary of pages

This document comprises a front cover, an inside front cover, pages i to iv, pages 1 to 33, an inside back cover and a back cover.

Foreword

Publishing information

This part of BS 7666 was published by BSI and came into effect on 28 July 2006. It was prepared by Technical Committee IST/36, Geographic information. A list of organizations represented on this committee can be obtained on request to its secretary.

Information about this document

BS 7666 was originally published over the period 1994 to 1996 in four parts.

These four parts were revised separately over the period 2000 to 2002. During 2004 to 2005, all the parts were revised together, with a new Part 0: *General model for gazetteers and spatial referencing* has been added. This provides a common structure for gazetteers of any class of geographic object.

BS 7666 now comprises the following parts:

- *Part 0: General model for gazetteers and spatial referencing;*
- *Part 1: Specification for a street gazetteer;*
- *Part 2: Specification for a land and property gazetteer;*
- *Part 5: Specification for a delivery point gazetteer.*

These parts supersede BS 7666-1:2000, BS 7666-2:2000, BS 7666-3:2000 and BS-7666-4:2002. The new Part 0 has subsumed Part 3: Specification for addresses. Part 1 has subsumed Part 4: Specification for recording public rights of way but in other respects is similar in scope to that published previously. The scope of Part 2 is largely unchanged. Part 5 is new in scope.

Parts BS 7666-1:2000, BS 7666-2:2000, BS 7666-3:2000 and BS-7666-4:2002 are now withdrawn. Thus Parts 3 and 4 will not form part of the standard although there will now be a Part 5. Renumbering has not taken place to avoid any confusion with the withdrawn standards.

The main changes that have been made to this Part of the Standard are as follows:

- the structure, content and terminology are made consistent with the new general model in Part 0;
- the addition of a requirement for gazetteer metadata;
- the addition of a facility for recording descriptive identifiers in multiple languages;
- the addition of a facility for classification of streets;
- the removal of the tolerance attribute and the replacement of the spatial locator by a pair of extremity points;
- the addition of a facility for cross-referencing to other datasets;
- removal of the requirement for the identifier of an elementary street unit to be the coordinates of a reference point and replacement with a general identifier;
- the addition of a informative annex on Public Rights of Way;
- other minor changes in the light of experience of use.

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.

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.

Introduction

Streets are defined in different ways by different people for different purposes, and references can be by name, number or description. In this part of the standard, a general, all-encompassing definition is taken. Different ways of referencing streets are specified. Individual streets may have multiple references, and streets may overlap.

The intention of this part of BS 7666 is to enable the consistent definition of streets and their compilation into street gazetteers. This will be used for a range of purposes, including highways and streetworks management, property addressing and navigation. A street gazetteer will also provide the street referencing element of land and property gazetteers which provide a definitive list of land parcels and properties, each uniquely identified.

Data to be recorded about Public Rights of Way, previously defined in BS 7666-4:2002, is included as an annex to this part, and applies only to England and Wales.

1 Scope

This part of BS 7666 specifies the data to be maintained in a gazetteer of streets, consistent with Part 0 of this standard. This enables different users of street information to use the same data with consistency of content, accuracy, currency and format. Different ways of referencing a street are defined so that data can be accessed by street name, description, route number, unique reference number or external cross-reference.

This part of BS 7666 also specifies the means of representing the geometry of the street in terms of coordinates. Three ways are allowed for this with successive levels of detail:

- a) by identifying the end points of a street, and representing the street as a single line segment;
- b) by breaking the street at its intermediate junctions to create a set of constituent line segments, termed elementary street units;
- c) by describing the course of each elementary street unit.

Each of these options is defined by a level of conformance to the standard.

This part of BS 7666 is intended for use by those compiling street gazetteers for purposes of highways and streetworks management, property addressing and navigation. It does not provide a database design or a transfer format.

This part of BS 7666 also specifies how additional information on Public Rights of Way may be recorded. This only applies to England and Wales.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the reference cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

BS 7666-0, *Spatial datasets for geographical referencing — Part 0: General model for gazetteers and spatial referencing*.

BS ISO 639-2, *Codes for the representation of the names of languages — Alpha-3 code*.

BS ISO 8601, *Data elements and interchange formats — Information interchange — Representation of dates and times*.

3 Terms and definitions

For the purposes of this part of BS 7666, the terms and definitions given in BS 7666-0 and the following apply.

3.1 administrative area

geographic area that may be either:

- a) a highest level local administrative area, which may be a county, unitary authority, metropolitan district, council area (Scotland) or district council (Northern Ireland); or

- b) Greater London; or
- c) an island or group of islands.

NOTE Examples of administrative areas are “Gloucestershire”, “London”, “Shetland Islands” and “the Isle of Man”.

3.2 coordinated point

defined point, the position of which is recorded as a pair of coordinates relative to coordinate reference system

NOTE Examples are a pair of National Grid coordinates in Great Britain.

3.3 designated street name

name for a street that has been allocated by a street naming authority

NOTE This can normally be identified by a name plate on the street. In some cases, there may be two designated street names, e.g. where there are multiple languages used.

3.4 elementary street unit

subset of a street that forms a continuous length between adjacent junctions or other significant landmarks

NOTE An example of a significant landmark is a marker of the boundary of a locality or town.

3.5 locality

local area identified formally or informally by a particular name where people live or where certain activities take place that may form part of a town, or stand in its own right within the context of one or more administrative areas

NOTE A locality may be a neighbourhood, suburb, district, village, estate, settlement, parish or industrial estate

3.6 public right of way PROW

legally defined route over land in England and Wales along which any member of the public has the right to pass and repass

3.7 street

way or thoroughfare providing a right of passage on foot, by cycle or by motor vehicle, or access to more than one property

NOTE The term “street” is used throughout this standard to encompass the terms “street”, “road” and “thoroughfare”. A street may be the whole or a part of a highway, road, lane, footpath, cyclepath, square, court, alley or passage. Rivers, canals, waterways, railways and drives to a single property are not streets.

3.8 street description

description, allocated by a street naming authority or highway authority, used to identify a street that does not have a designated street name

NOTE A street that does not have a designated street name does not normally have a street name plate.

3.9 street reference

name, number or description that identifies a street or part of a street

3.10 street naming authority

body designated with the responsibility for naming all streets in a defined area

NOTE This is normally a district council, unitary authority, metropolitan district, or London borough including the City of London. It is not necessarily the highway authority.

3.11 street number

road or route number allocated to a street by a relevant authority

NOTE Examples of a relevant authority are the Department for Transport, the Scottish Executive, the Welsh Assembly Government, Northern Ireland Roads Service and the local highway authority. Examples of numbered streets are "A1" and "C1111". A street may have more than one street number.

3.12 town

city or town that is not an administrative area, or a suburb of an administrative area that does not form part of another town

NOTE Examples of towns are "Luton", "Gosforth" and "Ealing".

3.13 unofficial street name

name by which a street is known, but which has not been designated by a street naming authority

NOTE Such a street name may cover part or all of one or several streets. Examples are "Lovers Lane", "The Great North Road" and "The old A14".

4 Street gazetteer requirements

4.1 Scope of gazetteer

A street gazetteer contains references to instance of streets within its territory of use. The following types of street may be included within the scope of the gazetteer:

- a) motorway;
- b) trunk road;
- c) classified (numbered or unnumbered) road;
- d) any other named or unnamed road;
- e) public right of way;
- f) any other way that falls within the definition of a street that is required to be included to meet a particular user need.

NOTE A "virtual" street such as a high rise building, or a river, canal, waterway or railway should not be included in the gazetteer. An indoor street within a shopping mall may be included in a gazetteer.

4.2 Street references

For every street, a street reference shall be given, in the form of either:

- the designated street name; or
- the street description if the street does not have a designated street name.

NOTE 1 Additional street references in the form of a street number and/or an unofficial street name may also be included.

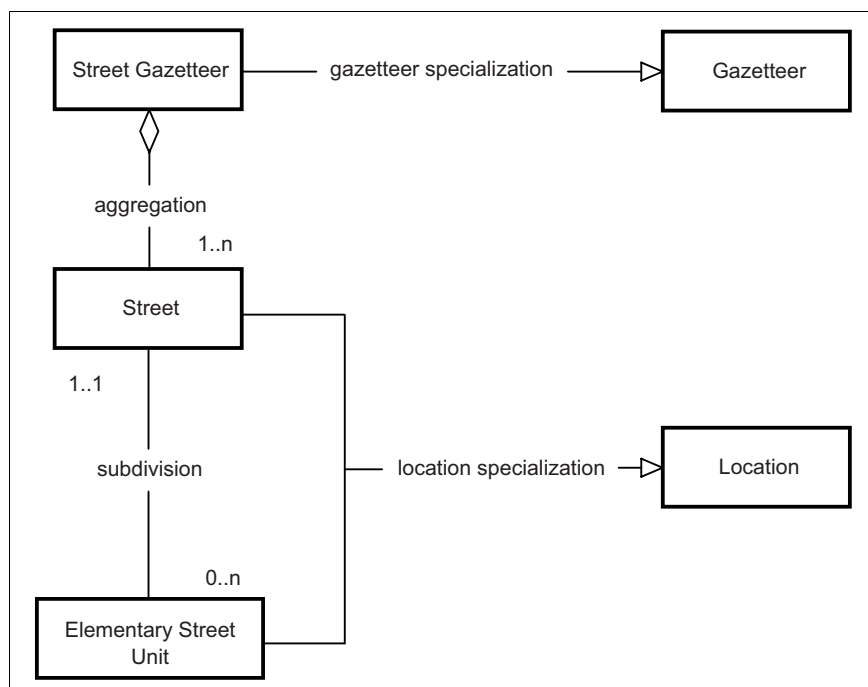
NOTE 2 An individual street may have more than one entry in the gazetteer as a result of being referenced in several ways, and different street references may overlap, e.g. Ellesmere Road is part of the Great West Road.

A gazetteer may also contain details of the **elementary street units**, the individual lengths of street that make up the street.

NOTE 3 A set of conformance levels for street gazetteers are defined in Annex A covering the optional requirements. Three levels of conformance are defined.

The relationship between the street and elementary street unit is shown in Figure 1.

Figure 1 **Street gazetteer model**



NOTE The diagramming convention used in this figure is explained in Annex B. Street Gazetteer is a specialization of a Gazetteer as defined in Part 0 of this British Standard. Street and Elementary Street unit are specializations of Location as defined in Part 0 of this British Standard.

4.3 Conformance

A street gazetteer shall conform to one of the three levels defined in Annex A.

4.4 Special cases

4.4.1 Roundabouts

If named, a roundabout shall be included in the gazetteer with a separate street reference. If unnamed, a roundabout may be included in the gazetteer with a description or may be regarded as part of one of the streets, usually the major street passing through or leading to or from the roundabout. Mini roundabouts shall be considered as part of all the streets in which they are situated. Where a street continues beyond a roundabout, it shall be considered as a single street with a single street reference, unless the street name or number changes at the roundabout.

NOTE If elementary street units are recorded for a roundabout, then there will be one between each pair of adjacent streets coming into the roundabout.

4.4.2 Dual carriageway streets

A dual carriageway shall be considered as one street in the gazetteer, unless the individual carriageways have different names or numbers. If elementary street units are recorded in the gazetteer, then the two individual carriageways shall be recorded as separate elementary street units.

4.4.3 Link and slip roads

All link and slip roads at junctions and interchanges shall be considered as part of the street to which they relate unless they are separately named. Where a link or slip road relates equally to two streets, e.g. a slip road between two motorways, it shall be considered as part of the one onto which it leads. If elementary street units are recorded, then each link or slip road shall be recorded as an elementary street unit.

4.4.4 Cycle routes beside carriageways

A cycle route separated from a carriageway (e.g. by a verge or kerb) shall be recorded as a separate street.

NOTE Where a cycle route is within the carriageway (e.g. where it is differentiated by coloured tarmac or a white line), it is considered to be part of the carriageway.

5 Gazetteer metadata

5.1 Requirements

A gazetteer shall have metadata associated with it. This metadata shall be described by certain high-level attributes as specified in 5.2 and 5.3.

5.2 Mandatory elements

A gazetteer shall have the following mandatory (M) metadata elements:

- a) **name:** name of the gazetteer;
- b) **scope:** description of the content of the gazetteer, including the rules for inclusion or exclusion, e.g. “public streets and streets used for creating addresses of residential and commercial property”;

- c) **territory of use:** geographic domain of the street gazetteer, e.g. Great Britain, England and Wales, Scotland, Northern Ireland;
- d) **gazetteer owner:** the organization or organizations with overall responsibility for the gazetteer, e.g. “DNA Scotland” or “the Local Government Information House”;
- e) **custodian:** the role, organization or organizations responsible for the compilation and maintenance of the data in the gazetteer, e.g. the Street Gazetteer Custodian;
- f) **coordinate system:** coordinate reference system used to describe position in the gazetteer, e.g. the National Grid (NG) of Great Britain, or Irish Transverse Mercator (ITM);
- g) **current date:** the date at which the gazetteer can be considered to be current.

NOTE The current date is not necessarily the date of creation or last update of the gazetteer.

5.3 Optional elements

A gazetteer shall have the following optional (O) metadata elements:

- a) **coordinate axis units:** unit of measure of coordinates, e.g. metres;
- b) **metadata date:** date of last update of metadata;
- c) **street classification scheme:** the street classification scheme used in the gazetteer;
- d) **state coding scheme:** the coding scheme used to define the logical state of a street recorded in the gazetteer;

NOTE An example coding scheme is given in C.2 in Annex C.

- e) **language(s):** the languages used in the gazetteer for names and descriptors, identified by a three letter code as specified in BS ISO 639-2 (see Annex C);

NOTE Where no language is specified, a default of English is assumed.

- f) **character set(s):** any non-English character set(s) used to record entries in the gazetteer, e.g. Gaelic;
- g) **external cross-referencing scheme(s):** any external cross-referencing scheme(s) used in the gazetteer to reference the street, other than that defined in this Standard, e.g. Ordnance Survey TOIDs (topographic identifiers).

5.4 Structure

Metadata about the gazetteer shall be provided as defined in 5.2 and 5.3 and in accordance with Table 1.

NOTE A UML model is shown in Annex B, which also shows the relationships with the other classes. An example metadata set is given in Annex D.