Ordnance Survey®

Boundary-Line™
User guide

Preface

This user guide contains information you need to make effective use of Boundary-Line™. It is designed to help you understand the information contained in the data, as well as providing detailed technical information and the data format specification.

This user guide has been checked and validated before issue and every reasonable endeavour made to ensure that the contents are accurate. However, if you find an error, omission, or otherwise wish to make a suggestion as to how this user guide can be improved, please contact us at customerservices@ordnancesurvey.co.uk or the address shown under contact details or use the Product and service performance report form at appendix D.

Contact details

The Customer Service Centre will be pleased to deal with your enquiries:

Phone: 023 8030 5030
Fax: 023 8079 2615
Email: customerservices@ordnancesurvey.co.uk

Welsh Language HelpLine [in Welsh] phone: 08456 05 05 04.

or write to:

Customer Service Centre
Ordnance Survey
Romsey Road
SOUTHAMPTON
United Kingdom
SO16 4GU

Visit the Ordnance Survey® web site at: www.ordnancesurvey.co.uk

Product performance

If you have any problems with or identify any errors in the data, or this user guide, please complete the Product and service performance report form at appendix D and return it to us.

Liability

A full description of the terms and conditions of supply and use of Boundary-Line and this user guide is detailed in the signed *Customer contract* held by you or your organisation. You are not permitted to use Boundary-Line if you or your organisation has not signed the *Customer contract*.

Ordnance Survey makes every effort to ensure that data supplied is free from errors and omissions. It is the customer's responsibility to ensure that data ordered is suitable for the intended purpose. We will not be liable to the customer or any other party for any loss, damage, inconvenience or expense resulting from the use of, or reliance upon, the data.

Delivery of Boundary-Line

You are advised to copy the supplied data to a back-up medium.

Further information can be found on the Ordnance Survey website.

Data copyright

The supply charge for Boundary-Line covers the copyright licence for internal business use and all hard copying. Further information can be found on the Ordnance Survey website.

It is the responsibility of the holder of the digital map data to ensure that any plotted or printed output contains the required copyright acknowledgement.

User guide copyright

This document is © Crown copyright 2004. All rights reserved. It is supplied with Boundary-Line to allow you to make effective use of the data. Any part of it may be copied for your own business use. Business use is defined as actions related to business decision-making or as part of day-to-day operations associated with the running of a business. No part of this document may be copied or incorporated in products, services or publications you generate for onward sale or as free promotional or support material without the prior written permission of Ordnance Survey.

Printing of this user guide

If you wish to print this user guide, it is suggested that it is bound on the left side.

Trademarks

Ordnance Survey, the OS Symbol, Land-Line, Landplan and OSGB36 are registered trademarks and Boundary-Line is a trademark of Ordnance Survey, the national mapping agency of Great Britain.

Contents

Chapter 1   An introduction to Boundary-Line

Boundary-Line is an Ordnance Survey dataset within the business geographics portfolio of products. It provides administrative and electoral boundaries and their names for England, Scotland and Wales. Boundary-Line represents a full hierarchy of boundaries.

The main data sources used for the creation of Boundary-Line are Ordnance Survey's 1:10 00 scale boundary record sheets and Landplan digital data.

Appropriate software is needed to use the data for your intended application.

Boundary-Line features

Boundary-Line is a structured link and polygon dataset.

The data includes three levels of features:

1   the **administrative unit** has attributes which include the administrative unit's name and census code. The administrative unit feature is classified by means of a feature type. It also has explicit pointers to the **polygons** that define its area;

2   the **polygon** includes attributes that define its area value; it also has explicit pointers to the **links** that chains (or makes up) its edge and may have pointers to holes within the area; and

3   the **links** have a geometry that defines their shape.

Administrative units, polygons and links have unique identifiers to enable you to create consistent references between successive releases of Boundary-Line.

A list of the features within Boundary-Line includes:

- civil parish (England) and community (Wales);

- county;

- district;

- metropolitan district;

- electoral division (county and unitary);

- European Electoral region;

- Greater London Authority;

- London borough (including the county of the City of London);

- Greater London Authority Assembly constituencies (the London Proportional Representation voting areas);

- metropolitan district;

- parliamentary (Westminster) constituency;

- parliamentary (Scottish) constituency and electoral region;

- unitary authority;

- ward (district, unitary, metropolitan and London borough);

- Welsh Assembly constituency and electoral region;

- extent of the realm (EOR) – either mean low water mark (England and Wales), mean low water springs mark (Scotland) or seaward boundary extensions;

- mean high water mark (England and Wales) and/or mean high water springs mark (Scotland) (both are abbreviated to MHW in this user guide);

- distinctive names;

- census agency codes in England, Wales and Scotland for counties, unitary authorities, districts, wards and electoral divisions;

- area measurements;

- unique administrative unit, link and polygon identifiers; and

- annual updates of the dataset.

Boundary-Line benefits

The high specification of Boundary-Line offers you a number of benefits:

- Full coverage of Great Britain, supplied as England, Scotland and Wales

- The key boundary dataset for Great Britain suited to multiple applications using a geographical information system (GIS) and other digital mapping systems.

- A full hierarchy of boundaries.

- Structured vector format, offering great functionality.

- Census agency codes (where available) allow you to link Boundary-Line polygons with census statistics.

- Area values for every polygon.

- Mean high water (springs) mark enables you to build and explicitly identify dry land areas within coastal polygons.

- Documented annual updates allow you to easily identify relevant changes.

- Unique administrative area, link and polygon identifiers are retained at each update, allowing revised boundaries to be related to your existing data.

Boundary-Line applications

Boundary-Line provides a detailed and comprehensive dataset of coverage in Great Britain of administrative and voting boundaries that is designed to support a wide range of GIS and desktop mapping applications, such as:

- political analysis;

- environmental analysis;

- statistical analysis for social or marketing decision making;

- geodemographic analysis;

- asset management;

- planning applications;

- legal work;

- reference and research; or

- customised graphic output.

What you need to use Boundary-Line

Hardware

Provided that sufficient memory, storage facilities and a suitable software viewer application (see below) are available, there are no constraints on the hardware platforms that can be used. The range of hardware that can typically be used varies from higher specification personal computers (PCs) to mainframe computers.

Software

Boundary-Line is inert data and does not include software for data manipulation. To fully exploit Boundary-Line it is necessary to use appropriate application software. There are many proprietary systems available and Ordnance Survey publishes a list of GIS, computer-aided design (CAD) and digital mapping system suppliers who have independently confirmed their software can import Ordnance Survey NTF format data.

Boundary-Line supply options

The data is supplied by named files and the named files include all of the other relevant sub-levels of electoral boundaries that belong under that high level administration; these are:

Named file type	Possible sub-level of boundaries within the named file
County	The named county, district, district ward, civil parish, county ED.
Unitary authority	The named unitary authority, unitary authority ward or unitary authority ED as appropriate, civil parish where appropriate, together with community in Wales.
Metropolitan district	The named metropolitan district, metropolitan district ward, civil parish where appropriate.
Greater London Authority	The Greater London Authority, Greater London Authority Assembly constituency, London borough, London borough ward.
Scottish parliamentary electoral region	The named Scottish parliamentary electoral region, Scottish parliamentary constituency.

Named file type	Possible sub-level of boundaries within the named file
Welsh assembly electoral region	The named Welsh Assembly electoral region, Welsh Assembly constituency.
Westminster constituency	The named Westminster constituency.
European region	The named European region.

The supply options for the Boundary-Line NTF specification are as follows:

- A complete dataset of Great Britain has 837 named files made up of:
  35 county files;
  100 unitary authority files;
  641 Westminster constituency files;
  11 European region files;
  36 metropolitan district files;
  1 Greater London Authority file;
  8 Scottish parliamentary electoral region files; and
  5 Welsh Assembly electoral region files.

- The dataset for England has 656 named files made up of:
  35 county files;
  46 unitary files;
  529 Westminster constituency files;
  9 European region files;
  36 metropolitan district files; and
  1 Greater London Authority file.

- The dataset for Wales has 68 named files made up of:
  22 unitary authority files;
  40 Westminster constituency files;
  1 European region file; and
  5 Welsh Assembly electoral region files.

- The dataset for Scotland has 113 named files made up of:
  32 unitary authority files;
  72 Westminster constituency files[1];
  1 European region file; and
  8 Scottish parliamentary electoral region files.

As a consequence of the named file supply, all coordinates in the supplied data file are full Ordnance Survey National Grid coordinates, as there is no concept of local origin.

---

[1] *Changes to Scottish Westminster constituencies will be incorporated into Boundary-Line in the October 2005 release.*

Transfer formats

Boundary-Line is created in:

- BS 7567 (NTF v2.0 Level 3).

Media

Boundary-Line is supplied on CD-ROM only.

Update

Boundary-Line is now updated twice a year, spring and autumn, allowing a choice of which update is preferred.

The **spring** update represents boundaries (as defined and modified by Orders, Acts and Statutory Instruments) at the date of the May local elections.

The **autumn** update also represents boundaries at the date of the May local elections and is operative from the previous spring/May to autumn/October release.

Each update is accompanied by details of all changes.

Boundary-Line output options

A suggested output within 25% of the source scale (1:10 00) should allow all data to be plotted or displayed without distortions occurring.

Chapter 2   Overview of Boundary-Line

Data overview

Basic principles

Boundary-Line is the key dataset of administrative and voting boundaries in Great Britain. It is a representation in computer-readable form of a specialist large-scale map. Real-world objects, which may be tangible (such as the mean high water mark) or intangible (such as a district boundary), are included.

GIS software provides the functionality to store, manage and manipulate this digital map data. The properties of the data make it suitable as a key base for users wishing to develop applications. Boundary-Line is also suitable for use within other digital mapping systems. Boundary-Line is coordinated on the National Grid, which allows for the easy superimposition of other datasets.

Links represent all linear features; that is boundaries, extent of the realm (EOR), and mean high water (springs) mark (MHW). They are strings of coordinated line segments and have relationships to polygon features in order to convey descriptive characteristics of the link. Links in Boundary-Line may comprise up to several thousand line segments. A chain is the closed loop of links bounding a polygon.

Nodes are the representation of the points at the start and end of a link. At least one node occurs on the perimeter of a polygon where the bounding link completes the enclosure of the area. There may be many nodes connecting the bounding links of a polygon. Nodes are implicit in Boundary-Line.

Polygons are continuous areas defined by sets of bounding closed lines. They are representational of areas, such as electoral wards, and have relationships to administration collection features in order to convey descriptive characteristics of the polygon. These are explicit within the data and can be viewed and manipulated with appropriate software.

Each link feature has associated geometry; this will be two or more coordinate pairs.

Boundary-Line data source

Boundary-Line is currently updated by mapping against Landplan (1:10 00 scale) and in certain cases large scale sources.

See chapter 4 Quality statement and specification for full information.

Boundary-Line data structure

Real-world administrative and voting units are modelled and named and have explicit pointers to the polygons that define their area of influence.

Boundary-Line data is defined geometrically as a structured link and polygon database. Linear boundary features are represented as links – a series of connected coordinated points. Chains of one or more links form explicit closed polygons.

Each polygon has explicit pointers to the links that represent its boundaries.

Link geometry and polygon chains within the data model determine the geometric (positional) characteristics of the data.

Each real-world administrative or electoral voting unit is classified by means of an area code. The polygons are classified indirectly by the administrative or electoral voting unit collection in which they appear. These polygons within the data model also have associated attributes – these give the entities meaning, representing the geometric characteristic of an entity with items like area or a unique identity. Boundary links are classified indirectly by the polygon chains in which they appear.

Administrative or electoral voting units, polygons and links each have unique identifiers that enable you to create consistent references between successive releases of Boundary-Line.

Complex polygons

Complex polygons are polygons that wholly enclose other polygons. They only occur when an administrative unit wholly encloses one or more others at the same level, for example, a rural district surrounding an urban district.

Figure 2.1: A complex polygon – Cambridge District surrounded by South Cambridgeshire District
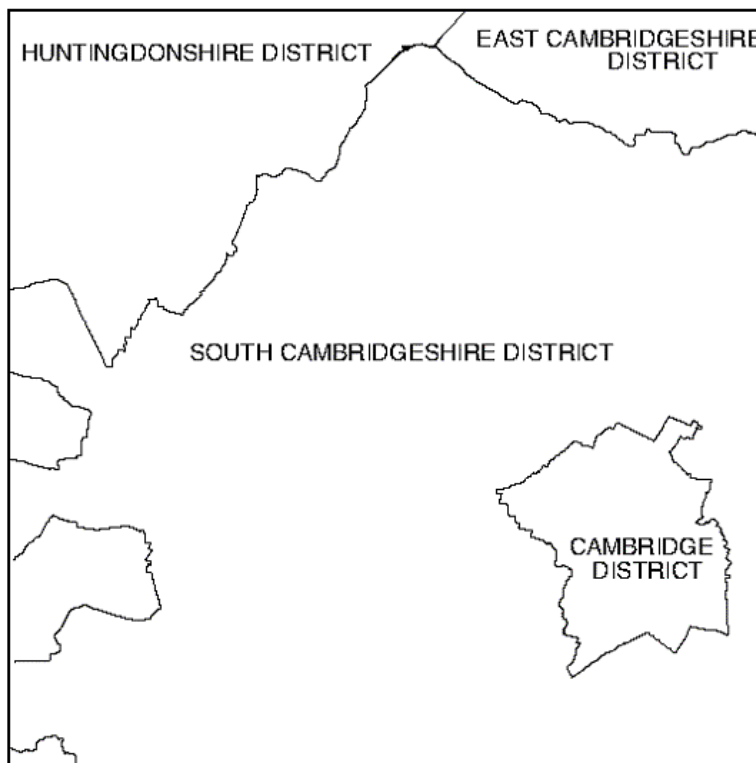
Feature information

Boundary-Line has three feature classes:

- administrative units with attributes;
- polygon features with attributes; and
- linear features – links with attributes and geometry.

The position and shape of real-world features are represented in Boundary-Line data as geometric structures of links. They are arranged into recognisable categories. Full listings of individual features are given in chapter 5 NTF explained.

Each feature has the following component:

- feature attribute data.

Each geometric feature has an additional component:

- feature position.

Each link has a geometric and attribute component. The geometric component defines the positional characteristic of the feature, and explicit relationships exist between administrative units and polygons and the links and polygons. The attribute component defines the descriptive characteristics of the feature, together with the classification.

Feature position

The geometry of map features is defined in terms of coordinates. All coordinates used in Boundary-Line are based on the Ordnance Survey National Grid (NG) coordinate referencing system and are quoted to a 0.1 m resolution. Despite this, Boundary-Line data can be no more accurate than its source, primarily the generalised 1:10 00 scale mapping. There will be positional differences between the boundaries in Boundary-Line and Land-Line®. This is due to Land-Line being surveyed to a high degree of accuracy and associated to ground surface features as it is at a larger map scale, such as 1:1250.

Boundary-Line has been created as a more generalised set of administrative and electoral boundaries for the whole of Great Britain. Digitised using Ordnance Survey (generalised) 1:10 00 Landplan® mapping. The process of generalising for 1:10 00 scale mapping may have caused certain features to be moved from their true ground position for the purposes of map clarity. The result being Boundary-Line and Land-Line boundaries will not always be coincident.

Feature attribute data

An attribute is the descriptive characteristic of a feature, that is, a non-spatial element.

In Ordnance Survey map data terms, an attribute can be a feature type (these are character codes), or a distinctive name, number or code, for example, Bassett ward or 145.232 hectares.

Attribute codes relevant to NTF are fully described below and in chapter 5 NTF explained.

Area codes

Each administrative unit is classified by means of an area code (AC). These area codes are allocated when each feature is initially interpreted and captured from source. This means that a county is distinguished from a ward by the area code allocated to it. The polygon features can be classified by tracing their relationships to administrative units. Consequently links can be classified by tracing their relationships to polygons. These area codes are all listed in chapter 5 NTF explained.

Other attributes

It is possible, with appropriate software, for you to add other names or values of your own choice as attributes of features.

Each polygon carries the following attributes:

PI   polygon ID, a number unique to the polygon, for example, 070087; and

HA   area of polygon, recorded to a precision of 0.001 hectare.

Each link carries the following attributes where relevant:

LK   link ID, a number unique to the link, for example, 0000064368; and

FC   selected links carry feature code 0071 for MHW.

Each administrative area (collection of polygon features) carries the following attributes where relevant:

AI administrative unit ID – a number unique to the administrative unit, for example, 024431;

NM distinctive name of administrative unit – for example, Hampshire County;

OP census agency code (provided by the Office of National Statistics (England and Wales) and the General Register Office for Scotland) where available (county, district, unitary authority, ward and some electoral divisions only) (see chapter 3 Boundary-Line explained for a full explanation);

TY the type of the non-area – for example, VA meaning voting area.

AC code indicating the type of area, for example, CPC meaning civil parish or community;

NB selected areas have this code to indicate a non-area is coincident with this area;

NA coastal areas carry the area of non-land that constitutes this area; and

Unique identifiers for administrative unit, link and polygon

There are three identifiers in Boundary-Line that help you identify features and which are provided to create consistent references between successive releases of Boundary-Line data. They are unique within each feature type throughout the whole dataset and maintained through successive annual updates.

See also Other attributes and chapter 5 NTF explained for more information.

These identifiers are never modified – only created or deleted. If a feature is deleted from the Boundary-Line database, then the identifier ceases to exist.

ADMIN_AREA_ID (AI)

Each administrative unit carries a unique identifier AI; this is the same identifier that was supplied in the previous specification of Boundary-Line. The same AI attribute is associated with every component polygon forming part of an administrative unit, irrespective of the number of polygons.

The same AI attribute is also associated with every component administration forming part of an administrative unit, even if the administration carries different name attributes (NM), for example, MILTON CP and MILTON CP (Det No 1).

GLOBAL_LINK_ID (LK)

Each link carries a unique identifier LK. This is the same identifier that was supplied in the previous specification of Boundary-Line.

GLOBAL_POLYGON_ID (PI)

Each polygon carries a unique identifier PI. This is generally the same identifier that was supplied in the previous specification of Boundary-Line.

Text

There is no direct cartographic text in Boundary-Line. Names, area values and census agency codes are held as attributes.

Chapter 3   Boundary-Line explained

Relationships of administrative areas

The Boundary-Line product supplies the administrative area relationships explicitly within the [COLLECT] record.

A district is a division of a county; a civil parish is a division of a district. A county is divided for voting purposes into electoral divisions (EDs) and a district is divided for voting purposes into district wards.

With the introduction of unitary authorities, there are now two- and three-tier local government hierarchies. The three-tier system remains unchanged; the two-tier system has unitary authorities replacing the county and district levels of administration.

Unitary authorities may be divided into civil parishes or communities (except in Scotland); and unitary authority wards or unitary authority EDs for voting purposes. In Wales the voting area is the unitary authority ED; in Scotland it is the unitary authority ward, and in England it is the unitary authority ward (except in the Isle of Wight, where it is the unitary authority ED).

England also has metropolitan districts; these have no county administration. These districts are divided for voting purposes into metropolitan district wards.

With the introduction of the regional government for London, in this document called the Greater London Authority; the proportional representation voting area for this new administration is the Greater London Authority Assembly constituency. The existing London borough structure also has a relationship with the new Greater London Authority and each London borough is divided for voting purposes into London borough wards.

Scotland is divided into parliamentary constituencies for voting purposes; to elect members (MSPs) to the Scottish Parliament the Scottish parliamentary electoral region is a grouping of Scottish parliamentary constituencies.

Wales is divided into assembly constituencies for voting purposes; to elect members (AMs) to the Welsh Assembly. The Welsh Assembly electoral region is a grouping of Welsh Assembly constituencies.

Great Britain is divided into European regions (Scotland, Wales and nine English regions) for voting purposes to elect members (MEPs) to the European parliament.

England, Scotland and Wales are divided into parliamentary constituencies for voting purposes to elect members (MPs) to the Westminster parliament. Parliamentary constituencies are made up of combinations of Wards (or Electoral Divisions in Wales.

Figure 3.1a: Relationships of administrative areas for England
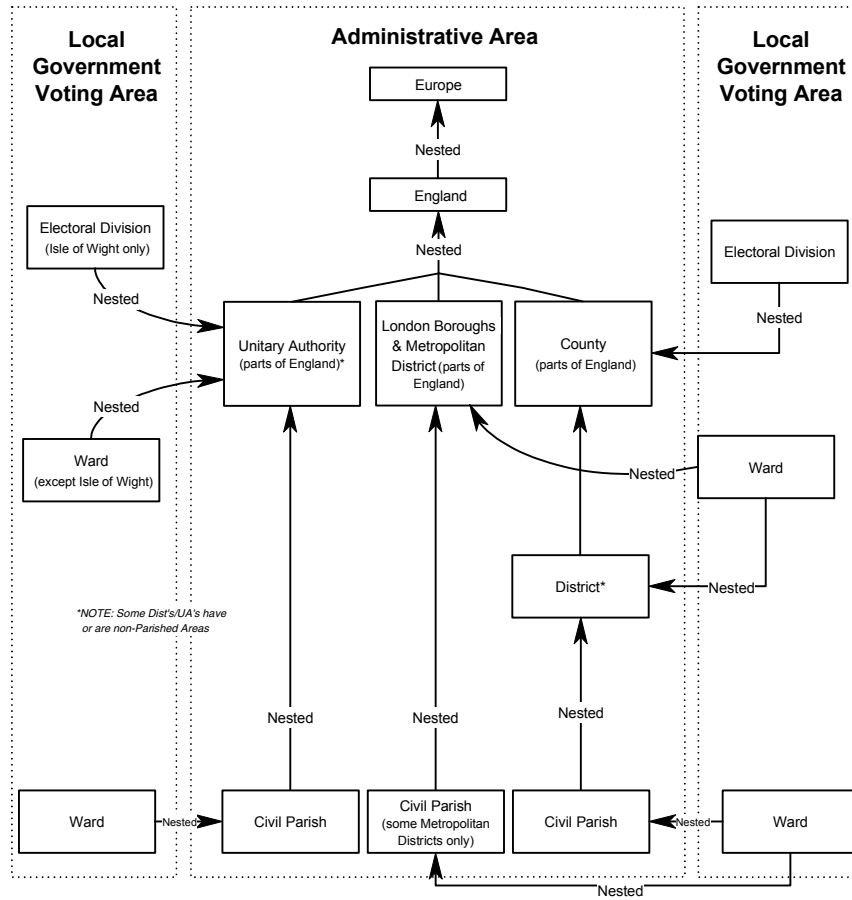
Figure 3.1b: Relationships of administrative areas for Wales
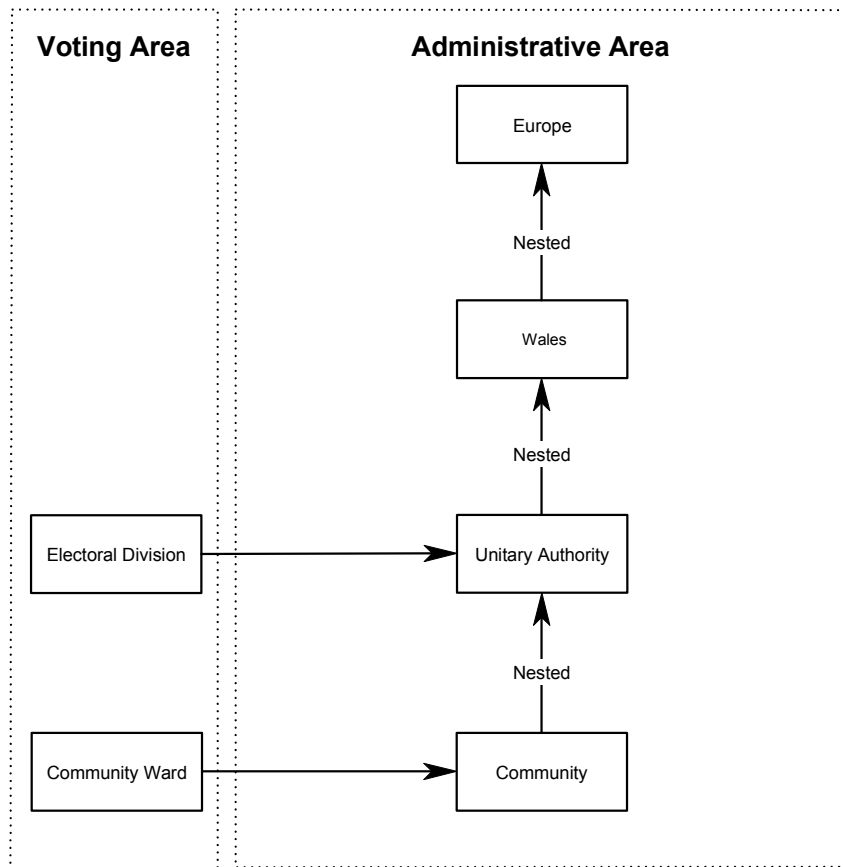
Figure 3.1c: Relationships of administrative areas for Scotland
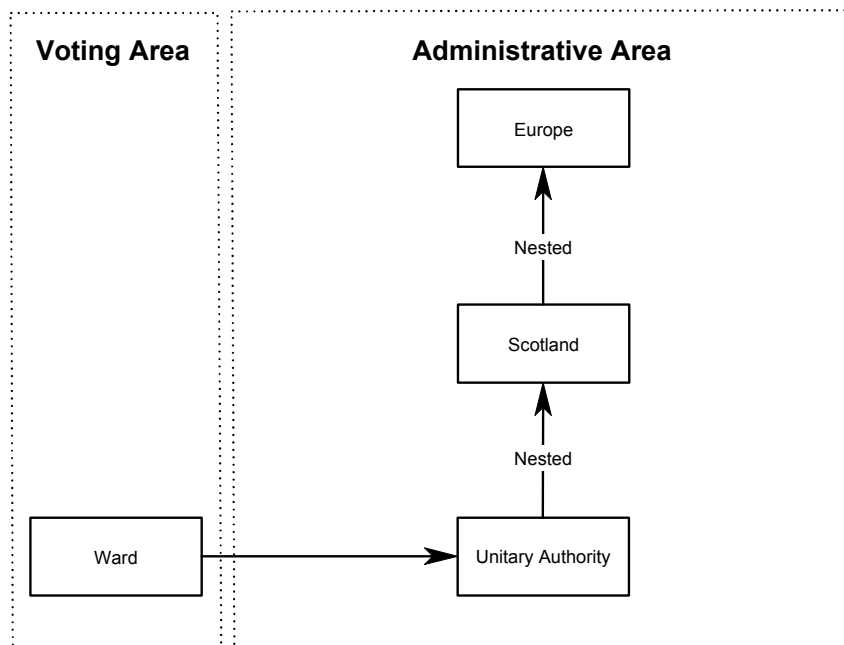
Boundary-Line principles and features

This following explains the representation of features in Boundary-Line and describes various definitions and exceptions.

Administrative area

A term used by Ordnance Survey to refer to all public administrative areas.

For the Boundary-Line dataset the following are included under this term:

- In England:

    - county;

    - unitary authority;

    - metropolitan district;

    - district;

    - civil parish (Note: depicted if appropriate notification has been received. Not all parishes have councils);

    - Isles of Scilly;

    - European Electoral region;

    - parliamentary (Westminster) constituency;

    - electoral division (of county or unitary authority);

    - ward (of district, metropolitan district, London borough, unitary authority);

    - London borough (including the county of the City of London);

    - Greater London Authority; and

    - Greater London Authority Assembly constituency.

- In Wales:

  - unitary authority;

  - community (Note depicted if appropriate notification has been received);

  - European Electoral region;

  - parliamentary (Westminster) constituency;

  - electoral division (of unitary authority);

  - Welsh Assembly constituency; and

  - Welsh Assembly electoral region.

- In Scotland:

  - unitary authority;

  - European Electoral region;

  - parliamentary (Westminster) constituency;

  - ward (of unitary authority);

  - Scottish parliamentary constituency; and

  - Scottish Parliament electoral region.

Area values

Area values exist for every polygon in Boundary-Line, area values are quoted to the current Office of the Deputy Prime Minister (ODPM) specification of 0.001 hectare. The value is subject to the inherited accuracies of the generalised 1:10 000 scale published mapping used as the source for Boundary-Line.

Boundary

A boundary is the limit of a predetermined and established area whose limit is determined by one or more lines. In Boundary-Line specifically, an administrative unit boundary, for example, a county area boundary.

Ceremonial counties

A ceremonial county is an area that has an appointed Lord Lieutenant and High Sheriff.

Ceremonial counties are not explicitly represented in Boundary-Line.

Detached parts

The description Detached, (Det), only applies to portions of local government or parliamentary constituency areas which are separated from the main area, being completely surrounded by other local government or parliamentary constituency areas and not connected by direct access on the ground.

The description will not be applied to islands or parts of islands in the sea.

Detached parts have the same AI attribute (and census agency code where applicable) as the main area. Where there is more than one detached part they are numbered consecutively within the name, for example, MILTON CP (Det No 1).

Divorcement

Part of a boundary separated from another, originally on the same alignment. Divorcements are created by the revision of one boundary and not the other.

Figure 3.2: Divorced boundaries
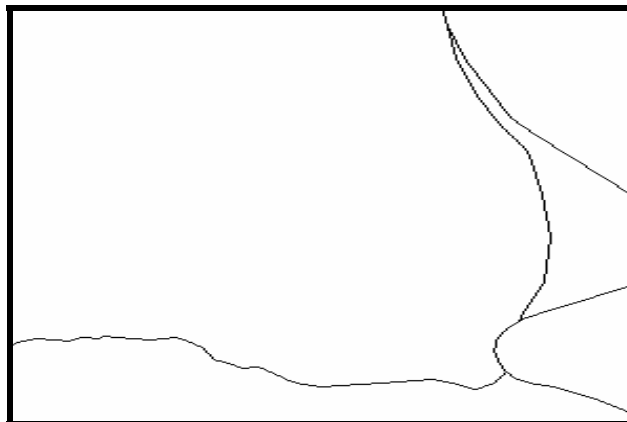
Figure 3.2 shows a boundary divorcement. The county boundary between Kent and East Sussex has been realigned, whilst the parliamentary (Westminster) constituency boundary has remained in its original position. It is likely that the parliamentary (Westminster) constituency boundary will also be realigned at some time in the future.

Effective date

A future event of unknown date, for example, the next general election, at which time the changes specified in an Act, Order or Statutory Instrument will come into operation. This term is solely applied to parliamentary (Westminster) and European region boundaries.

Boundary changes are not normally incorporated into Boundary-Line unless they have become operative at the time of the annual snapshot of boundaries that each release of Boundary-Line represents.

Because of this, parliamentary constituencies and European regions in Boundary-Line are normally those in which the MPs and MEPs are or were sitting at the time of the annual snapshot of boundaries that each release of Boundary-Line represents.

For example, the new parliamentary constituency boundaries which became effective at the time of the May 1997 general election were first represented in the autumn[2] 1997 Boundary-Line release.

---

[2] *Spring and Autumn updates introduced 2002.*

Exception areas

The following are specific exceptions to the normal rules:

Greater London and the metropolitan counties

Greater London covers the area of the 32 London Boroughs plus the City and County of the City of London.

Greater London is no longer a County. The Greater London Authority, which has no authority over the autonomous London Boroughs, is held as one named file with all of the sub-levels of boundary within it.

The London Boroughs and the City and County of the City of London have been classified as London Boroughs.

The Metropolitan Districts within the former Metropolitan Counties (disbanded in 1985) are classified as Metropolitan Districts:

- Greater Manchester;

- Merseyside;

- South Yorkshire;

- West Yorkshire;

- Tyne and Wear; and

- West Midlands.

The Inner and Middle Temples

The 'places' known as 'The Inner and Middle Temples' are within the City of London only for some purposes. They are not shown in Boundary-Line, but their areas have been wholly included within the City and its Wards for this dataset. There are two distinct areas with other areas held jointly, and the boundaries are so intermixed that they have never been published by Ordnance Survey separately. A record of these boundaries is, however, held in the Boundary Record Library for reference purposes.

Isles of Scilly

The Isles of Scilly are administered by a single-tier authority, the 'Council of The Isles of Scilly', and are not part of the County of Cornwall although linked with it for some purposes.

For the purposes of this dataset however it is classified as a County. There are no Districts, Electoral Divisions or Wards within this area.

Parish/Community Wards

Divisions of parishes (England) and communities (Wales), not included in Boundary-Line.

Lands common to

These are areas where the limits of the parishes concerned have not been determined and the area itself is common to (or belongs to) two or more parishes. In Boundary-Line they are classified as separate parishes with the name LANDS COMMON TO THE PARISHES OF____ applied (sometimes abbreviated to LCPs _____). These areas are allocated their own AI attributes and so on.

Figure 3.3: An example of Lands common to
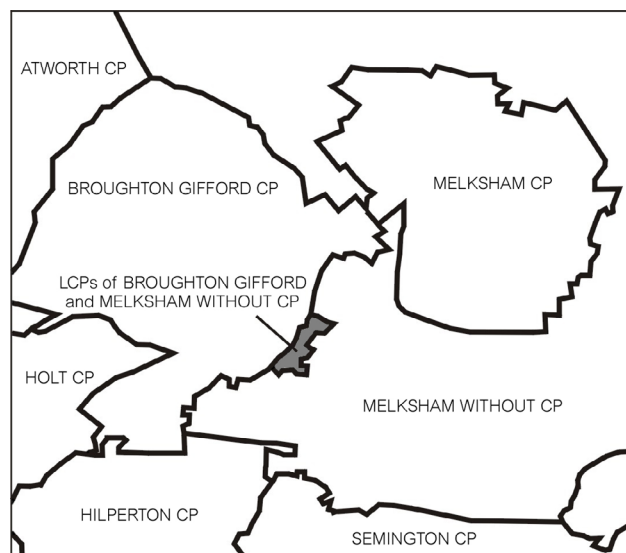
River Dee

The boundary between Merseyside (the former county of) and the county of Cheshire and the Flintshire unitary authority area has not been determined and the line adopted in Boundary-Line is for the purposes of Ordnance Survey only, so that polygons can be created.

River Mersey

Certain sections of the boundary between Merseyside (the former county of); the county of Cheshire and the districts of Liverpool, Wirral, Ellesmere Port and Neston, Vale Royal and Halton have never been determined.

For the purposes of Boundary-Line, and by agreement with ODPM:

1   the district boundaries of those parts of Ellesmere Port and Neston, Vale Royal and Halton that abut the Mersey estuary have been made coincident with the limits of the relevant district's wards at the centre of the channel at high water (CCHW);

2   the undetermined part of the southern boundary of Liverpool district, in the Mersey estuary, has been made coincident with the limits of that district's wards at the centre of the channel at high water (CCHW);

3   the undetermined part of the county boundary between Merseyside (the former county of) and Cheshire in that part of the estuary between the districts of Ellesmere Port and Neston and Liverpool has been made coincident with the limits of the electoral divisions at the centre of the channel at high water (CCHW); and

4   the northern limit of the parliamentary constituency of Ellesmere Port and Neston is the mean high water mark on the south side of the Mersey estuary.

The wards of Windsor Castle

The Upper and Middle wards of Windsor Castle do not form part of the district of Windsor and Maidenhead but have been included for the purposes of this dataset.

Honorary titles

Honorary titles granted to local government areas, such as city, borough and town, are not included in Boundary-Line.

National boundaries

The boundaries between England and Wales and England and Scotland are treated as county boundaries in Boundary-Line.

Census agency codes

These codes are a unique system of referencing for administrative units.

The following types of unit are coded in Boundary-Line where they have been made available: counties, districts, metropolitan districts, London boroughs, unitary authorities, district wards, unitary authority wards and unitary authority EDs.

The codes are allocated by the Office of National Statistics (ONS) for England and Wales and by the General Register Office for Scotland (GROS) for Scottish areas.

NOTES:

The codes for Scotland were included for the first time in the 1997 release of Boundary-Line.

The NTF OP record has a maximum of seven characters for the census codes.

In three-tier local government hierarchy areas, the format of the codes is a combination of two digits for county and two letters each for district and ward, in the form CCDDWW (see the following example codes) or CCDDPAR for Parish census agency code.

Example codes for typical wards in Cheshire:

13UBGU   (College ward)

13UHGY   (Helsby ward)

13UDGH   (Birchin ward).

The code for a county consists of the first two characters, followed by four spaces.

Example code for a county

13   (Cheshire)

The code for a district consists of the first four characters, followed by two spaces:

Example code for a typical district

13UB   (13 = Cheshire county and UB = Chester district)

In two-tier local government hierarchy areas, the format of the codes is four letters, followed by two spaces, where the first two letters represent the unitary authority, and the second two, the ward.

Example code for a sample ward in a unitary authority

ETMA   (ET = Halton and MA = Halton Brook ward)

The code for a unitary authority area consists of the first two characters, followed by four spaces.

Example code for a unitary authority

NJ   (Sir y Fflint – Flintshire)

Any OP code is set at 999999 when the information is not available to Ordnance Survey.

The code is blank when the administrative unit does not have a code.

Operative dates

A calendar date, given in an Order, Act or Statutory Instrument, on which the specified boundary changes will come into operation. Dates given may be up to four years after the publication of the Order, Act or Statutory Instrument and may apply to any type of boundary other than parliamentary or European regions. Each release of Boundary-Line represents boundaries (as defined and modified by Orders, Acts and Statutory Instruments where available to Ordnance Survey) as at a date that falls, typically, during the first week of the preceding May. Boundaries having an operative date that has not yet been reached by this date are not represented in that release of Boundary-Line.

Order, Act or Statutory Instrument

A document signed by the relevant Secretary of State or a local authority letter describing and giving legal authority for boundary changes. Other Acts and Orders can effect the addition of new boundary information, for example, seaward extensions and harbour acts.

Superseded date

The last date on which a boundary was current. Where an effective date applies, the superseded date will be the day before the next dissolution of Parliament, or the day before the next European Assembly election in the United Kingdom.

Boundaries are no longer shown in Boundary-Line if they have been superseded at the time of the annual snapshot of boundaries that each release of Boundary-Line represents.

Survey change

When changes occur to tide lines, rivers or streams caused by natural and gradual forces, any boundaries that are linked to these altered features will move with them.

When the movement of a boundary, MHW or EOR alignment in Boundary-Line reflects such changes, this will be noted in the Update notes that accompany each release of Boundary-Line.

Unannexed areas

This is an area within the realm which is not included in all the relevant administrative units. The area will remain unannexed until further legislation changes its situation and the polygon represents a hole in that level of administration.

Unitary authorities

Unitary authorities and counties effectively create a contiguous layer of administrative units throughout the whole of Great Britain.

The coastline and associated items

Extent of the realm (EOR)

The external bounding line of the Boundary-Line dataset is the extent of the realm.

The *Territorial Waters Jurisdiction Act 1878* and the *Territorial Waters Order in Council 1964* confirm that the extent of the realm of Great Britain as used by Ordnance Survey is properly shown to the limit of mean low water for the time being, except where extended by Parliament.

This means that the extent of realm will be:

- the mean low water mark (mean low water springs in Scotland) except when landward of a seaward extension or Point B;

- the mean high water mark (mean high water springs in Scotland), where coincident with mean low water or mean low water springs, but not when landward of a seaward extension or Point B;

- Point B; and

- seaward extensions.

To display the EOR both mean high water (MHW) and another type of boundary, for example, European electoral region or Westminster constituency, need to be displayed together.

Figure 3.4a: Treatment of boundaries in estuaries
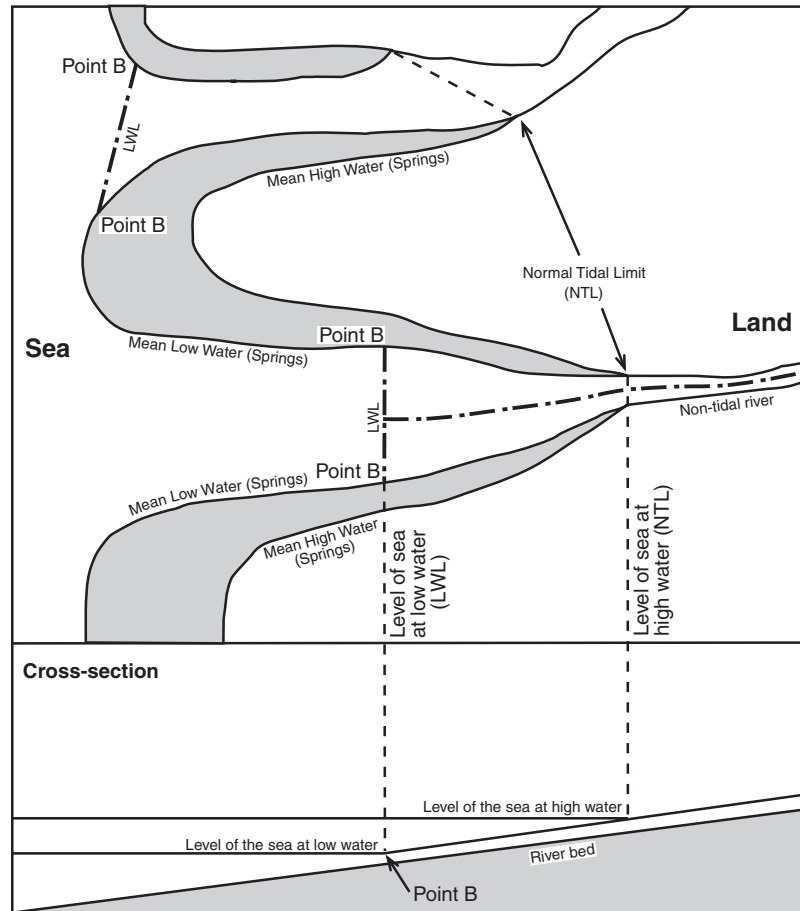
In this figure, the extent of the realm (EOR) follows mean low water, crossing the estuaries at LWL.

Figure 3.4b: Treatment of estuaries in Boundary-Line
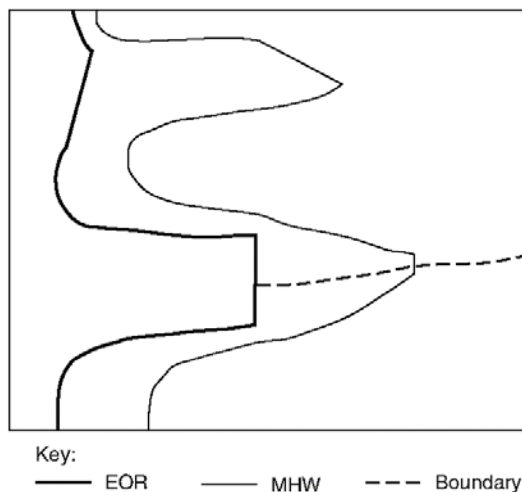
This figure shows how the features depicted in figure 3.4a are represented in Boundary-Line.

Foreshore

The foreshore is taken to be the area of land between mean high water (springs) mark and the extent of the realm which will include:

- tidal water within a seaward extension; and

- tidal water above Point B, to the normal tidal limit (NTL); together with the area between mean high water (springs) mark and the edge of the channel at mean low water (springs).

Mean high water (springs) mark is represented in Boundary-Line by a continuous link feature with feature code 0071. Mean low water (springs) mark is not shown, although it is generally coincident with the EOR.

The area of non-inland is referenced within each administrative unit using the NA attribute.

Islands and rocks in the sea

The following rules govern the representation in Boundary-Line of offshore islands and rocks in the sea:

- offshore rocks and islands will be shown if 0.4 hectares or more in area at high tide; but

- offshore islands with buildings will always be shown, irrespective of size;

- offshore islands or rocks will **not** be shown if they are:

    - beyond the defined extent of the realm, irrespective of size; or

    - covered at high tide.

If an offshore island or rock is shown, it will be contained within all the relevant administrative unit collections.

Mean high water (springs)

The mean high water (springs) mark is shown to NTL.

Areas of salt marsh, mud flats and so on, often have very complicated tide lines. For ease of digitising and to reduce data volumes, mean high water may be generalised in these areas (not Scotland).

Mean high water (springs) mark is represented in Boundary-Line by a continuous link feature with feature code 0071.

Mean high water (springs) mark is subject to continuous change but the captured alignment of a tide line is a snapshot on one day. It is not practical to revise tide lines very frequently.

Mean low water (springs)

Mean low water (springs) mark is shown as the extent of the realm, except when contained within a seaward extension, when it is then omitted.

Banks of sand, mud, shingle or rock separated from the main line of mean low water (springs), and covered at high tide, are not shown. When there are large areas of these banks separated from the main foreshore by narrow channels, the channels are ignored and the whole bounded by mean low water (springs).

The extension of the line of mean low water (springs) into a channel above Point B becomes edge of channel and is not shown.

Mean low water (springs) mark, and hence EOR, is subject to continuous change but the captured alignment of a tide line is a snapshot on one day. It is not practical to revise tide lines very frequently.

Normal tidal limit (NTL)

The point at which the level of a river or stream ceases to be affected by the tidal flow. This point is often an artificial barrier such as a lock or weir.

Pier

A pier under which water flows is not normally considered to be within the realm. There are some cases, however, where a structure has specifically been included within the realm by Act or Order, in which case mean high water (springs) mark and EOR is shown around the limits of the structure.

Point B

This is the intangible line across a channel where the level of the river meets the level of the sea at low water.

Within large channels or estuaries Point B is defined on the source documents for Boundary-Line, and is therefore shown as EOR.

In small channels, Point B is not shown on the source documents, so is assumed to be along the general line of low water and is shown as EOR.

Seaward extensions

These are artificial extensions to the realm that have been made by Act of Parliament. They extend the local government and parliamentary areas seaward of mean low water (springs) mark.

Figure 3.5: A seaward extension
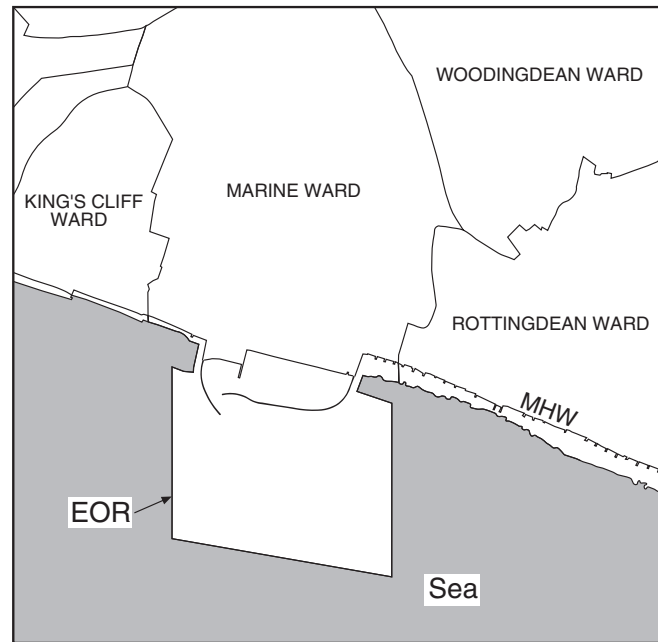
Structures in the sea

Breakwaters are structures of wood, stone, metal or other material built to break the force of waves. They can be separate from, or joined to, the mainland. If joined, they are generally included in the local government and parliamentary areas. If separate, they are not part of the local government and parliamentary area unless they are placed therein by legislation of some kind, for example, Plymouth breakwater is included in the local government area whilst the centre portion of the Portland Harbour breakwater is not.

Permanent structures in the sea, such as the forts in the Solent off Portsmouth Harbour, are usually included in local government and parliamentary areas.

Chapter 4   Quality statement and specification

Source of Boundary-Line

Boundary-Line for England and Wales was digitised from Ordnance Survey's boundaries record sheets at 1:10 000 scale (or, in some cases, at 1:10 560 scale).

The 1:10 00 scale published mapping has being progressively withdrawn as it is replaced by Landplan®. Boundary-Line now uses this as the source document, occasionally mapped against large scale source.

The census agency codes are supplied by Office of National Statistics (ONS) and General Registers of Scotland (GROS).

Currency

Boundary-Line is updated twice a year, spring and autumn. The updated product is a full replacement for all the listed administrative and electoral boundaries. The represented boundaries and administrative unit names are defined and modified by Orders, Acts and Statutory Instruments(SI's).Only changes that are operational from the 1st week of May in the current year of release will be included. *NOTE: Orders, Acts and SI's in exceptional circumstances due to processing or constitutional constraints may be excluded until the next suitable release*.

Update notes, detailing previous release changes, accompany each product release contained within the Doc file on the CD and as an Annex to this User Guide.

Subject to payment of the annual licence fee, you will be provided with a replacement dataset for all Boundary Line files, supplied in accordance with your licencing agreement.

Superseded boundaries

Boundaries are no longer shown in Boundary-Line if they have been superseded at the time of the annual snapshot of boundaries that each release of Boundary-Line represents.

Census agency codes

Revisions to census agency codes are incorporated into Boundary-Line as soon as practicable after the information is made available to Ordnance Survey.

Tide lines and rivers

Introduced in May 2005 an additional coastline reconciliation with Landplan. Changes to the Boundary-Line tide lines, plus natural and gradual changes to rivers and streams have been implemented along-side the previous boundary/coast association to enhance the MHW FC0071.

All boundary alignment changes in Boundary-Line will be reported in the Update notes accompanying each release of Boundary-Line.

Accuracy and resolution

The resolution of the coordinate system is 0.1 m. However, it is not possible to calculate meaningful accuracy limits for Boundary-Line data, due to both the graphic nature and scale of the primary source 1:10 000 scale published mapping. Such mapping is subject to limited map generalisation, where an impression of the ground detail is made due to the complexity of the detail and importance of certain features such as roads. This means that boundary alignments are cartographically represented in areas where accurate positional representation would be impossible.

Boundary-Line is derived from the basic scale of 1:10 000. The relationship of boundaries to ground detail mirrors the accuracy achieved on the source Ordnance Survey 1:10 000 Land-Plan. A consequence of this is Boundary-Line is superimposed upon boundaries in basic scales Land-Line data, variations in the two alignments will be seen.

Completeness

Completeness is a measure of the correspondence between the real world and the specified data content.

During digitising all Boundary-Line data is checked thoroughly against source documents to ensure as far as reasonably possible that no features have been omitted or misaligned.

Chapter 5   NTF explained

For convenience, BS 7567 (National Transfer Format v2.0) Level 3 is referred to as NTF.

The purpose of this chapter and chapter 6 is to:

- provide a brief description of the presentation of Boundary-Line in the NTF transfer format; and

- provide Licensed Partners with as much detail as necessary to enable Boundary-Line files in NTF to be easily understood and processed by application software.

The term data structure refers to the organisation and sequence of the records in the data file and **not** to the geographical topology of the data.

An overview of Boundary-Line in NTF

Boundary-Line data is supplied in the British Standard national format common to most of Ordnance Survey's digital map data products, namely NTF, and is transferred in level 3 as variable length records.

The British Standard for NTF stipulates the following for level 3:
This level supports a variety of data models that may include network data, polygons, semantic relationships and complex features.

This level is designed for:

- transferring basic geometry and simple features through the use of geometry and feature records;

- relating basic geometrical and topological elements to one or more features through the use of chain records;

- combining features to form complex features through the use of collection and complex polygon records;

- using text records both to relate text strings to features and cartographic output; and

- referencing and positioning external features, for example, raster data; the record structure at this level may also be defined to be compatible with data in levels 1 and 2.

The governing body for the industry standard NTF is the British Standards Institution (BSI).

Their address is:

389 Chiswick High Road
LONDON
W4 4AL

Phone: 020 8996 9000
Fax: 020 8996 7400

NOTE: Full details of the British Standard can be accessed through the British Standards Institution's web site at: www.bsi-global.com.

Conventions used in this user guide

Certain conventions are adopted as an aid to interpretation. In some cases the convention is dropped where the context is self-evident.

[ ]   Square brackets are placed around record names, for example, [VOLHDREC].

{ }   Curly brackets denote field names, for example, {REC_DESC} is the Record Descriptor field.

[ ]90   A two-digit number following square brackets denotes the Record Descriptor which uniquely identifies the record name between the brackets.

<S>   This represents the space character (ASCII code 32).

<3S>   This denotes three successive space characters.

%   This is the percentage character (ASCII code 37).

Version management

Product version

Each version of Boundary-Line is defined by a unique product specification. The product specification can be found in Boundary-Line data in the {FCNAME} field of the Database Header Record [DBHREC]. This user guide reflects the product specifications current at the time of its production, which are as follows:

Product:	**Boundary-Line**
Product specification:	**A20N_FC**
Product version date:	**May 2005**
Product version:	**BL2005 v1**

The {FCDATE} field of the Database Header Record [DBHREC] indicates the effective date of this product specification.

Product release

Boundary-Line updates are released twice a year, spring and autumn. The updates represent boundaries (as defined and modified by Orders, Acts and Statutory Instruments) as at a date that falls, typically, during the first week of the preceding May. This date appears in each Section Header Record [SECHREC] in the {SURV_DATE} field.

The copyright date of each release is the same as the {SURV_DATE} and is shown in each Section Header Record [SECHREC] in the {COPYRIGHT} field.

NTF version

The current version is NTF v2.0 Level 3 and will be supplied until further notice. The {NTFVER} field of the Volume Header Record [VOLHDREC] indicates the NTF version. The effective date of the definition of NTF v2.0 in Boundary-Line is 15 May 1992 and is indicated by the {DDATE} field of the Database Header Record [DBHREC].

Boundary-Line information specific to NTF

Area measurement

Area measurements are delivered for each polygon and complex polygon in each file, and include the foreshore and tidal water. They are quoted to a precision of 0.001 ha, which is the current ODPM specification. The accuracy of the measurement is dependent upon the source data used (see Accuracy and resolution).

Coordinates

Coordinate values and the number of coordinate pairs in a feature are transferred in the Geometry Record [GEOMETRY1].

All coordinates are expressed as strings of eight numeric characters for the eastings and eight numeric characters for the northings. Where appropriate, leading zeros are present to complete the eight characters.

All coordinates are full National Grid coordinates measured from the National Grid origin.

Link features

Links represent all linear features; that is boundaries, extent of the realm and mean high water (springs) mark.

Link features are transferred in the Geometry Record [GEOMETRY1].

All links are broken when they intersect with one another.

The first and last coordinate pairs in a link correspond exactly with the end coordinates of the adjoining link(s).

Links may comprise up to several thousand line segments.

Names

The distinctive name of an administrative area is conveyed by way of the NM attribute of the Collection of Features record. Punctuation is shown in names but not accentuation, for example, the name Westward Ho! Ward includes the exclamation mark, but Ynys Môn is shown as Ynys Mon. Each administrative area also carries a unique identifier known as the Admin area identifier or AI. The same AI attribute is attached to every component forming part of an administrative area, for example, MILTON CP and MILTON CP (Det No1).

Census agency codes

See chapter 3 Boundary-Line explained. These codes are conveyed in the OP attribute of the Collection of Features Record [COLLECT].

Record size

NTF data is written to the media in variable length records, with a maximum record length of 80 characters, which includes any continuation mark {CONT_MARK} and end of record {EOR} (which should not to be confused with EOR meaning extent of the realm).

Record terminator {EOR}

The end of record terminator is the percent character (%) (ASCII code 37) for both formatted and unformatted media.

Relationships between record IDs

Figure 5.1: Relationships between record IDs
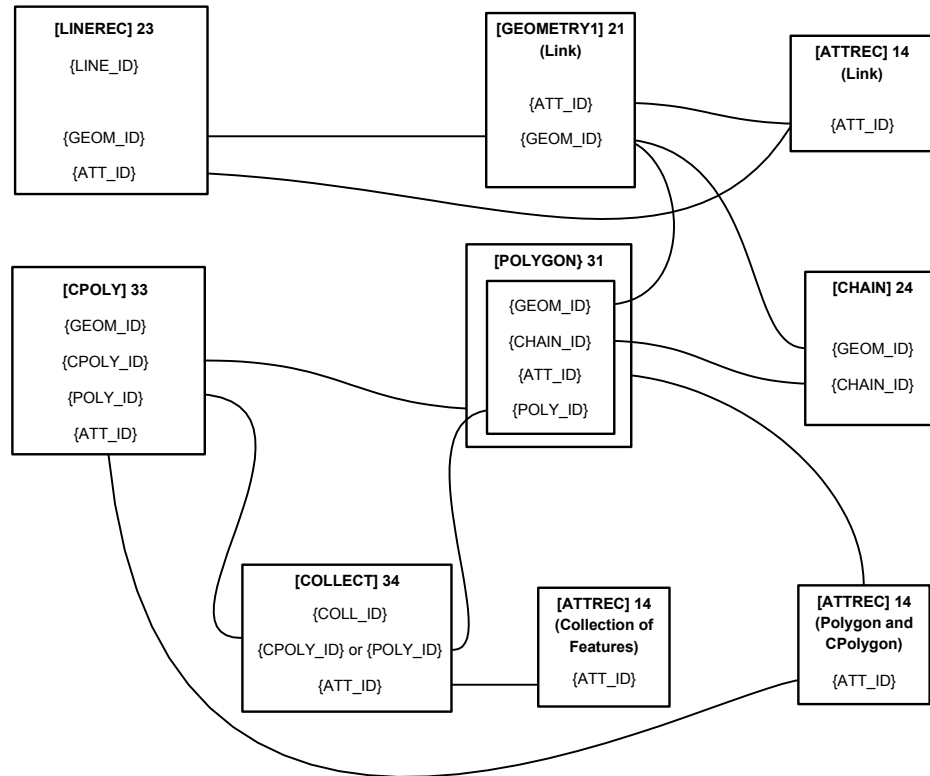
Additional relationships between record IDs

The same ID number is used wherever there is a one-to-one relationship between different types of records. Thus:

{COLL_ID}={ATT_ID} (for collection of features)

> The {COLL_ID} is found in the Collection of Features Record.
> The {ATT_ID} in the Attribute Record (for collection of features).

{CPOLY_ID}={ATT_ID} (for complex polygon)

> The {CPOLY_ID} is found in the Complex Polygon Record and the Collection of Features Record.
> The {ATT_ID} is found in the Attribute Record (for CPOLY).

{POLY_ID}={CHAIN_ID}={ATT_ID} (for polygon)

> The {POLY_ID} is found in the Polygon Record and the Collection of Features Record.
> The {CHAIN_ID} is found in the Polygon Record.
> The {ATT_ID} is found in the Attribute Record (for polygon).

{LINE_ID}={GEOM_ID}={ATT_ID} (for links)

> The {LINE_ID} is found in the Line Record.
> The {GEOM_ID} is found in the Geometry Record and the Chain Record.
> The {ATT_ID} is found in the Attribute Record (for link).

Tidal information

See also mean high water (springs) and mean low water (springs) in chapter 3 Boundary-Line explained.

Mean high water (springs) mark is shown as continuous lines within each delivered dataset. The lines do not interact with the administrative area lines.

Complex polygons

Administrative units wholly surrounding others of the same type are examples of polygons with holes in them. These are known as complex polygons.

The Complex Polygon Records [CPOLY] establish the connection between the single containing polygon, and the contained polygons.

The Complex Polygon Record [CPOLY] are referenced by the Collection of Features Record [COLLECT] for the administrative area of which they are part. They also have an Attribute Record [ATTREC] (for polygon and collection of features) and a Geometry Record [GEOMETRY1] (for polygons).

The polygons associated with a Complex Polygon Record [CPOLY] do not have any geometry or attributes, but the containing polygon is held explicitly.

Data classification and metadata

Attribute codes

Attribute codes provide supplementary information on a feature, providing such qualifying information as feature code, feature name, and so on. See also Other attributes in chapter 2 Overview of Boundary-Line.

The structure of the attributes is described in the Attribute Description Record [ATTDESC]. The Attribute Record [ATTREC] holds the attribute detail of a record.

The following attributes are used in the supply of Boundary-Line data:

Mnemonic	Name	Description
AI	ADMIN_AREA_ID	Unique identifier for administrative unit.
AC	AREA_CODE	Coded value for the area.
FC	FEAT_CODE	Feature code for selected links.
HA	HECTARES	Area of polygon within file.
LK	GLOBAL_LINK_ID	Unique identifier for a link.
NA	NON_INLAND_AREA	Area of non-inland within an administrative area.
NM	NAME	Distinctive name of administrative unit.
NB	NON_TYPE_CODE	Coded value of matching non-area.
OP	CENSUS_CODE	Code allocated by ONS or GROS to administrative unit.
PI	GLOBAL_POLYGON_ID	Unique identifier for a polygon.
TY	AREA_TYPE	Value indicating the type of administrative unit or area.

AI ADMIN_AREA_ID

This attribute is conveyed in the Attribute Record for collection of features and is a unique identifier for each administrative unit. Each AI attribute is unique to the entire Boundary-Line dataset and is retained through successive updates.

AC   AREA_CODE

A code allocated by the Ordnance Survey to indicate the administrative or voting area type. This is allocated to all administrative or voting areas. The current values are given below and also include codes for future areas.

NOTE: This list should be treated as dynamic as other types of boundaries may be added in the future.

Name	Code
Civil parish or community	CPC
County	CTY
County electoral division	CED
District	DIS
District ward	DIW
European region	EUR
Greater London Authority	GLA
Greater London Authority Assembly constituency	LAC
London borough	LBO
London borough ward	LBW
Metropolitan county	MTC
Metropolitan district	MTD
Metropolitan district ward	MTW
Nation	NAT
Non-civil parish or community	NCP
Realm	RLM
Scottish Parliament constituency	SPC
Scottish Parliament electoral region	SPE
Sea	SEA
Unitary authority	UTA
Unitary authority ward	UTW
Unitary authority electoral division	UTE
Welsh Assembly constituency	WAC
Welsh Assembly electoral region	WAE
Westminster constituency	WMC

FC   FEAT_CODE

The use of feature codes is reduced significantly. With this specification they will only be used to define non-standard link features. The mean high water tide lines will have the code 0071. The CD/TY attributes together with the [COLLECT] list will take over from the polygon seed feature codes. The boundary links will have implied codes through their roles in the various polygon [CHAIN] records.

HA   HECTARES

The area of the polygon quoted to a precision of 0.001 ha, but subject to the source data accuracies. See Accuracy and resolution.

LK   GLOBAL_LINK_ID

A unique identifier for each link. Each LK attribute is unique to the entire Boundary-Line dataset and is retained through successive updates.

NA   NON_INLAND_AREA

The area of the administrative unit that is currently defined as non-inland. This will include foreshore and tidal water. The value is quoted to a precision of 0.001 ha.

NM   NAME

This attribute is conveyed in the Attribute record for collection of features and contains the distinctive name of the administrative unit, for example LISS CP. The name will always include the type of the area in the text string, for example, HAMPSHIRE COUNTY rather than HAMPSHIRE. Exceptions to this rule include County of Hertfordshire, which is a unitary authority, and The Isles of Scilly, which is classified as a county for the purposes of Boundary-Line.

NB   NON_TYPE_CODE

A code allocated by the Ordnance Survey to indicate the non-administrative or non-voting area type that is defined by the corresponding administrative or voting area's polygon. The current values are as follows:

Name	Code
Civil parish or community	CPC
County	CTY
County electoral division	CED
Unitary authority electoral division	UTE
Unitary authority ward	UTW

OP   CENSUS_CODE

This attribute is conveyed in the Attribute record for the collection of features and provides the code allocated by ONS or GROS to the administrative unit. See chapter 3 Boundary-Line explained for details of the structure and meaning of the codes. Where the code is unavailable to Ordnance Survey, the attribute value is set to 999999.

PI   GLOBAL_POLYGON_ID

A unique identifier for every polygon. Each PI attribute is unique to the entire Boundary-Line dataset and is generally retained through successive updates of Boundary-Line.

TY   AREA_TYPE

A code allocated by Ordnance Survey to indicate the type of area. The current values are as follows:

Name	Type	Description
Civil administrative area	AA	Applied to the set of administrations for civil organisation
Civil voting area	VA	The set of voting areas for civil administrations
Filler area	FA	
Topographic area	TA	
Judicial area	JA	

Explicit administration and/or voting area relationships

The [COLLECT] record has been expanded to show the relationships between administrations and the administrations voting areas explicitly. The rules applied are as follows:

- For each **county** named in the file, the following will appear in the [COLLECT] record:

  {COLL_ID} to its related districts; and
  {COLL_ID} to its related county EDs.

- For each **district** named in the file, the following will appear in the [COLLECT] record:

  {COLL_ID} to its related district wards;
  {COLL_ID} to its related civil parishes or communities (where present); and
  {COLL_ID} to its related non-civil parishes (where present).

- For each **unitary authority** named in the file, the following will appear in the [COLLECT record:

  {COLL_ID} to its related unitary authority wards or unitary authority EDs;
  {COLL_ID} to its related civil parishes or communities (where present); and
  {COLL_ID} to its related non-civil parishes or communities (where present).

- For each **metropolitan district** named in the file, the following will appear in the [COLLECT] record:

  {COLL_ID} to its related metropolitan district wards;
  {COLL_ID} to its related civil parishes (where present); and
  {COLL_ID} to its related non-civil parishes (where present).

- For the **Greater London Authority,** the following will appear in the [COLLECT] record:

  {COLL_ID} to all the Greater London Authority Assembly constituencies; and
  {COLL_ID} to all the London boroughs (including the City and County of London).

- For each **London borough** named in the file, the following will appear in the [COLLECT] record:

  {COLL_ID} to its related London borough wards.

- For each **Scottish parliamentary electoral region** named in the file, the following will appear in [COLLECT]:

  {COLL_ID} to its related Scottish parliamentary constituencies.

- For each **Welsh Assembly electoral region** named in the file, the following will appear in the [COLLECT] record:

  {COLL_ID} to its related Welsh Assembly constituencies.

- For each **European region** named in the file, the following will appear in the [COLLECT] record:

  None – there is currently no administrative voting level below European region.

- For each **Westminster constituency** named in the file, the following will appear in the [COLLECT] record:

  None – there is currently no administrative voting level below Westminster constituency.

Transfer set structure

Boundary-Line data is in one or more transfer sets.

A transfer set equates to a single file.

Volume records

Each transfer set starts with a Volume Header Record [VOLHDREC] and terminates with a Volume Termination Record [VOLTERM].

Database records

The beginning of each transfer set is structured with the following introductory, or leading, records:

1 Database Header Record [DBHREC], which gives details of:

- the database name;

- NTF release date;

- feature classification table name; and

- the release date which applies to the whole of the transfer set.

2 Attribute Description Record [ATTDESC], which lists and gives a description of the attributes that can be applied to features within the transfer set.

3 Feature Classification Record [FEATCLASS], which gives the MHW feature code.

4 Code List Record [CODELIST], which lists and describes the coded values that appear in the attribute records AC, NB and TY.

These introductory records are followed by the data.

Section records

The section consists of two parts:

1 Section Header Record [SECHREC] – this gives the National Grid coordinates of the section; and

2 section body – this comprises all the features within the section.

Section body data

Line feature

Each line feature is represented by the use of the following records:

- Line Record [LINE_REC];

- Geometry Record [GEOMETRY1]; and

- Attribute Record [ATTREC].

Chain feature

Each chain feature is represented by the use of the following records:

- Chain Record [CHAIN];

- Geometry Record [GEOMETRY1]; and

- Attribute Record [ATTREC].

Each chain feature is in the data only once. One-to-many geometry records represent one chain record. There is one attribute record to each geometry record.

Polygon feature

Each polygon feature is represented by the use of the following records:

- Polygon Record [POLYGON];

- Chain Record [CHAIN]; and

- Attribute Record [ATTREC].

Each polygon feature is in the data only once. One polygon record represents one chain record. There is one attribute record to each polygon record.

NOTE: If the polygon record is part of a complex polygon record, then the polygon record does not reference an attribute record.

Complex polygon feature

Each complex polygon feature is depicted by the use of the following records:

- Complex Polygon Record [CPOLY];

- Polygon Record [POLYGON]; and

- Attribute Record [ATTREC].

Each complex polygon feature is in the data only once. More than one polygon record is required for each complex polygon record. There is one attribute record to each complex polygon record.

Collection of features

Each collection of features is depicted by the use of the following records:

- Collect Record [COLLECT];

- Polygon Record (either and) [POLYGON];

- Complex Polygon Record (either) [CPOLY];

- Collect Record (optional) [COLLECT]; and

- Attribute Record [ATTREC].

The collection of features must have at least one polygon record or complex polygon record.

A collect record is a combination of zero to many polygon records and/or zero to many complex polygon records and zero to many collect records. There is one attribute record to each collect record.

Section body records

Geometry Record [GEOMETRY1] contains the coordinate position(s), to 0.1 m of the feature. Line features contain two-to-many pairs.

Geometry continuation records contain any further coordinates required to complete a line feature.

How the section body data is arranged

*NOTE: NTF is designed to transfer any geographic data, therefore **there is no standard order of records.** This description of the order of records is specifically for the transfer of Boundary-Line data.*

Link feature	[LINEREC]	(Link)
	[GEOMETRY1]	
	[ATTREC]	(Link)

)
for completed file, followed by
(

Polygon feature	[POLYGON]	(Polygon)
	[ATTREC]	
	[CHAIN]	
and/or		
Complex polygon feature	[POLYGON]	)Repeating
	[CHAIN]	)
	[CPOLY]	
	[ATTREC]	(Complex polygon)
Collection of features	[COLLECT]	(Collection of features)
	[ATTREC]	

)
for completed file
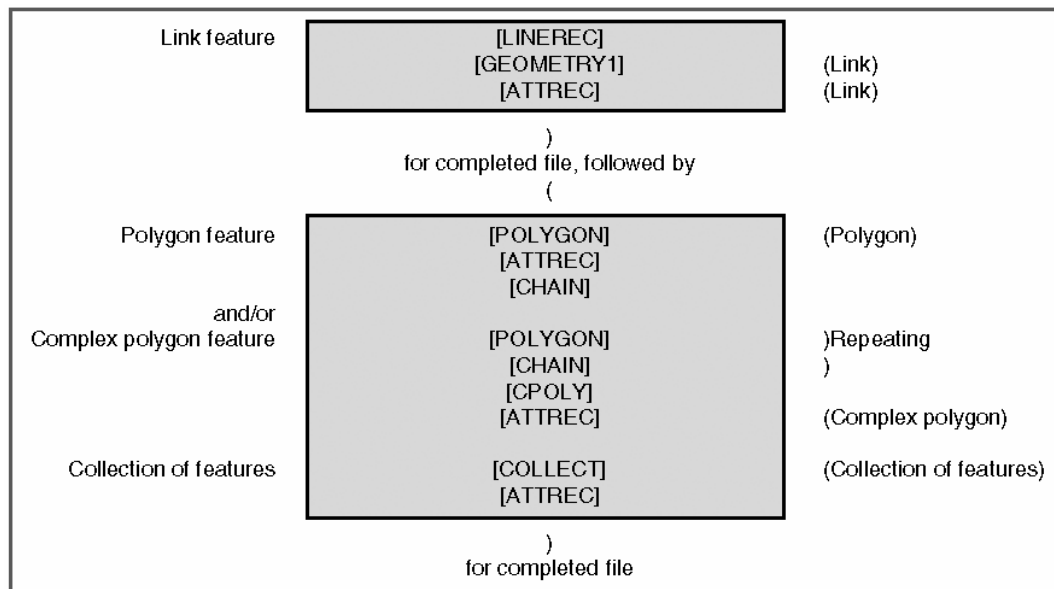
Section body record structure

Complex polygon records are included only to deal with polygons with holes, as described elsewhere. Otherwise, all records are compulsory for all transfers.

Figure 5.2: Hierarchy of records
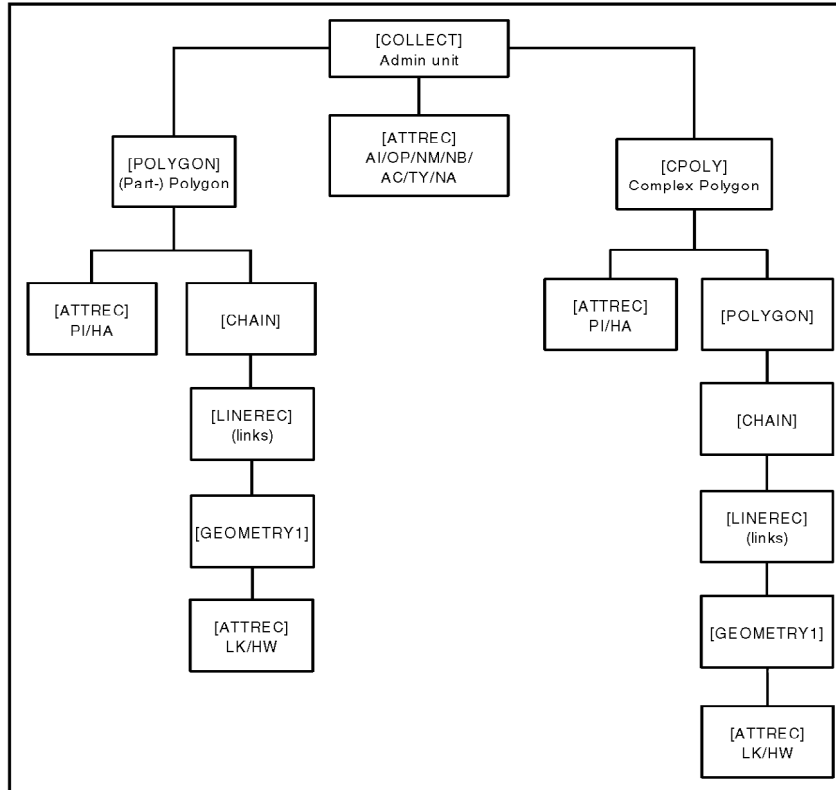
Data supply structure

Supply of data on formatted media

Boundary-Line data is not blocked but is written directly to the output device.

The transfer set has one dataset and one section. One or more transfer sets are put onto the medium.

01	VOLUME HEADER RECORD	01
02	DATABASE HEADER RECORD	
40	ATTRIBUTE DESCRIPTION RECORD	
05	FEATURE CLASSIFICATION RECORD	
07	SECTION HEADER RECORD	
	File 1 data	
99	VOLUME TERMINATION RECORD	*

01	VOLUME HEADER RECORD	01
02	DATABASE HEADER RECORD	
40	ATTRIBUTE DESCRIPTION RECORD	
05	FEATURE CLASSIFICATION RECORD	
07	SECTION HEADER RECORD	
	File 2 data	
99	VOLUME TERMINATION RECORD	*
	and so on	
	File n data	
99	VOLUME TERMINATION RECORD	*

```
*'99End Of Transfer Set0%'
```

Chapter 6   Record structures for the transfer of Boundary-Line in NTF

NTF record list

This list comprises the valid record types used in the Boundary-Line NTF transfer set.

Descriptor	Description	Record name
01	Volume Header Record – defines the donor and data type	[VOLHDREC]
02	Database Header Record – transfers data about the database	[DBHREC]
05	Feature Classification Record – defines data classifications	[FEATCLASS]
07	Section Header Record – coordinate and structure types, unit, scale factors and so on	[SECHREC]
14	Attribute Record – defines the attributes for link, name and polygon records	[ATTREC]
21	Two-dimensional Geometry Record – defines the two-dimensional geometry for a link	[GEOMETRY1]
23	Line Record – defines all of the line information. This is included for compatibility with other products	[LINEREC]
24	Chain Record – data about links forming polygons	[CHAIN]
31	Polygon Record – data about polygons	[POLYGON]
33	Complex Polygon Record – data about complex polygons	[CPOLY]
34	Collection of Features Record – data on how polygons and collections are associated	[COLLECT]
40	Attribute Description Record – defines attribute descriptions and their fields	[ATTDESC]
42	Code List Record – describes the coded values that appear in attribute fields	[CODELIST]
99	Volume Termination Record – defines the end of the transfer set	[VOLTERM]

Complex Polygon Record [CPOLY] are only included to deal with polygons with holes, as described in chapter 2 Overview of Boundary-Line; otherwise, all records are compulsory for all transfers.

Volume Header Record [VOLHDREC] 01

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	01	Record descriptor.
DONOR	03:22	A20	ORDNANCE SURVEY <5S>	Supplier.
RECIPIENT	23:42	A20	<20S>	Not used.
TRANDATE	43:50	D8	20040219	Date of creation of the transfer set.
SERIAL	51:54	I4	0000	Not used.
VOLNUM	55:56	I2	See note 1 below	Volume sequential number
NTFLEVEL	57:57	I1	3	NTF Level 3.
NTFVER	58:61	R4,2	0200	NTF version 2.0.
NTFOR	62:62	A1	V	Variable length records.
EOR	63:63	A1	% or <S>	Character used for EOR on unformatted media. If default, then EOR is % for formatted media.
DIVIDER	64:64	A1	\	Divider used to terminate variable length text fields.
CONT_MARK	65:65	I1	0	No further records.
EOR	66:66	A1	%	Record terminator.

Record example:

```
01ORDNANCE SURVEY                           2004021900000130200V \0%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
1234567890123456789012345678901234567890123456789012345678901234567890123456789 0
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: {VOLNUM} is 01 for the first volume and is incremented for subsequent volumes.

Database Header Record [DBHREC] 02

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	02	Record descriptor.
DBNAME	03:22	A20	Boundary-Line<7S>	Product name.
DDNAME	23:42	A20	DEFAULT_02.00<7S>	Standard NTF data dictionary name.
DDATE	43:50	D8	19920515	Date of standard data dictionary.
DDBASE	51:70	A20	<20S>	Not used.
DDBDATE	71:78	D8	00000000	Not used.
CONT_MARK	79:79	I1	1	Continuation record follows.
EOR	80:80	A1	%	Record terminator.

Continuation record

Field	Position	Format	Content	Description
REC_DESC	01:02	I2	00	Record descriptor.
FCNAME	03:22	A20	A20N_FC<13s>	Product specification. The name of the feature classification scheme being transferred.
FCDATE	23:30	D8	YYYYMMDD	Product specification date.
DQNAME	31:50	A20	<20S>	Not used.
DQDATE	51:58	D8	00000000	Not used.
DATA_MODEL	59:60	I2	00	Default model is used.
CONT_MARK	61:61	I1	0	No further records.
EOR	62:62	A1	%	Record terminator.

Record examples:

```
02Boundary-Line        DEFAULT_02.00        19920515                        000000001%
00A20N_FC              20021001                        00000000000%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

Feature Classification Record [FEATCLASS] 05

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	05	Record descriptor.
FEAT CODE	03:06	I4	0071	Feature code for MHW.
CODE_COM	07:16	A10	<10S>	Not used.
STCLASS	17:36	A20	<20S>	Not used.
FEATDES	*:*	A*	High Water Mark (HWM)	For MHW.
DIVIDER	*:*	A1	\	Divider used to terminate variable length fields.
CONT_MARK	*:*	I1	0	No further records.
EOR	*:*	A1	%	Record terminator.

* = variable integer

Record example:

```
050071                          High Water Mark (HWM)\0%
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

Section Header Record [SECHREC] 07

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	07	Record descriptor.
SECT_REF	03:12	I10	Admin name	Unique identifier of the main administration (see note 1 below).
COORD_TYP	13:13	I1	2	Defines rectangular coordinates, followed by spaces.
STRUC_TYP	14:14	I1	1	Defines vector data.
XYLEN	15:19	I5	00008	Refines {X_COORD} and {Y_COORD} to 8 digits.
XY_UNIT	20:20	I1	2	Defines units as metres.
XY_MULT	21:30	R10.3	0000000100	Multiplies coordinates by 0.100.
ZLEN	31:35	I5	00000	Not used.
Z_UNIT	36:36	I1	0	Not used.
Z_MULT	37:46	R10.3	0000001000	Multiplies coordinates by 0.100.
X_ORIG	47:56	I10	Coordinates	Eastings of file origin (always 0).
Y_ORIG	57:66	I10	Coordinates	Northings of file origin (always 0).
Z DATUM	67:76	I10	0000000000	Not used.
CONT_MARK	77:77	I1	1	Continuation record follows.
EOR	78:78	A1	%	Record terminator.

NOTE 1: *The {SECT_REF} field will comprise the first 10 characters of the main administration or the first 8 characters of the main administration followed by a 2-digit identifier if this does not make it unique within the dataset. The last two digit identifier has no relevance other than to make the record unique. The last two digits will not be maintained in the Boundary-Line 2001 release.*

Continuation record

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	00	Record descriptor.
XMIN	03:12	I10	The smallest X value in file	Relative limits of file in metres (see note 1 below).
YMIN	13:22	I10	The smallest Y value in file	Relative limits of file in metres (see note 1 below).
XMAX	23:32	I10	The largest X value in file	Relative limits of file in metres (see note 1 below).
YMAX	33:42	I10	The largest Y value in file	Relative limits of file in metres (see note 1 below).
XY_ACC	43:47	R5,2	00000	Not used.
Z_ACC	48:52	R5,2	00000	Not used.
SURV_DATE	53:60	D8	YYYYMMDD	Date of the annual snapshot of boundaries represented by the annual product release.
LAST_AMND	61:68	D8	00000000	Not used.
COPYRIGHT	69:76	D8	YYYYMMDD	Copyright date for the annual product release.
CONT_MARK	77:77	I1	0	No further records.
EOR	78:78	A1	%	Record terminator.

Record examples:

```
07CHESHIRE.C2100008200000000100000000000000010000000000000000000000000000000001%
00000032487900003389940000401780000038792900000000002000050400000000200005040%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: *{XMIN}, {YMIN}, {XMAX} and {YMAX} values are calculated from a geometric square enclosing the delivery set. In some cases this may mean that {XMIN} has a negative value.*

Attribute Record [ATTREC] 14 for Line Record [LINEREC] 23

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	14	Record descriptor.
ATT_ID	03:08	I6	Variable number	Unique ID in file. Cross reference to {ATT_ID} in Geometry record.
VAL_TYPE	09:10	A2	LK	Mnemonic for GLOBAL_LINK_ID attribute.
VALUE	11:20	I10	See notes 1 and 3 below	Unique identifier for link.
VAL_TYPE	21:22	A2	FC (see note 4 below)	Mnemonic for FEAT_CODE attribute (optional).
VALUE	23:26	I4	See notes 2 and 4 below	Feature code (optional).
CONT_MARK	27:27	I1	0	No further records.
EOR	28:28	A1	%	Record terminator.

Record example:

```
14800044LK0000000000FC00710%
14800045LK00001509600%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: Valid {VALUE} for LK range is 0000040000 to 9999999999.

NOTE 2: Valid {VALUE} for FC range is 0071.

NOTE 3: Where FC is 0071, the LK will be 0000000000.

NOTE 4: Where optional fields are not present, {CONT_MARK} and {EOR} fields will be in positions 21 and 22.

Attribute Record [ATTREC] 14 for Collection of Features Record [COLLECT] 34

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	14	Record descriptor.
ATT_ID	03:08	I6	Variable number	Unique in file. Cross reference to {ATT_ID} in Collect Record.
VAL_TYPE	09:10	A2	AI	Mnemonic for ADMIN_AREA_ID attribute.
VALUE	11:16	I6	See note 1 below	Unique in dataset number which is the Admin area ID; 000000 for non-areas.
VAL_TYPE	17:18	A2	NA	Mnemonic for NON_INLAND_AREA.
VALUE	19:30	R12,3	Variable number	Area of non-land.
VAL_TYPE	31:32	A2	OP	Mnemonic for CENSUS_CODE attribute.
VALUE	33:39	A7	CC(<5S>)	County census agency code. See note 2 below.
			or CCDD(<3S>)	District census agency code. See note 2 below.
			or CCDDWW(<S>)	ED and/or ward census agency code (in district). See note 2 below.
			or CCDDPAR	Parish census agency code. See note 2.
			or 00UA(<3S>)	Unitary census agency code. See note 2 below.
			or 00UAWW(<1S>)	Ward census agency code (in unitary area). See note 2 below.
			or 00UAPAR	Parish or community census agency code(in unitary area).See note 2 below.
			or 999999(<S>)	Census agency code unavailable to Ordnance Survey.
			or <7S>	No census agency code allocated.
VAL_TYPE	40:41	A2	TY	Type of admin area or voting area (AA or VA), or FA for non-area or TA for sea.
VALUE	42:43	A2		See note 5 below.
VAL_TYPE	44:45	A2	AC	Code of admin area or voting area.
VALUE	46:48	A3		See note 6 below.
VAL_TYPE	49:50	A2	NM	Mnemonic for NAME attribute. See note 7 below.
VALUE	51:*	A*	See note 3 below	Admin area name or sea.
DIVIDER	*:*	A1	\	Divider used to terminate variable length text fields.
VAL_TYPE	*:*	A2	NB	Mnemonic for NON_TYPE_CODE (optional).
VALUE	*:*	A3	See note 4 below	Code for the non-type that exactly matches this area.
CONT_MARK	*:*	I1	0	No further records
			or 1	or continuation record follows.
EOR	*:*	A1	%	Record terminator.

*= variable integer.

Record examples:

```
14002553AI012343NA000024521862OP13     TYAAACCTY NMCHESHIRE COUNTY\ 0%
14001588AI016261NA000002482386OP45UH   TYAAACDISNMWORTHING DISTRICT\ NBCPC0%
14000183AI025588NA000008998298OPEE     TYAAACUTANMREDCAR AND CLEVELAND\NBUTENB1%
00CTY0%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: Valid {VALUE} for AI range is 00000 to 999999.

NOTE 2: CC represents a two-digit county code element; DD, WW and UA represent two-letter code elements for district, ward and unitary authority, respectively. See census agency codes in chapter 4.

NOTE 3: Continuation Record(s) [CONTREC] commence with the record descriptor 00.

NOTE 4:

Civil parish or community	*CPC*
County	*CTY*
County electoral division	*CED*
Unitary authority electoral division	*UTE*
Unitary authority ward	*UTW*

NOTE 5:

Civil administrative area	*AA*
Civil voting area	*VA*
Topographic area	*TA*
Judicial area	*JA*
Filler area	*FA*

NOTE 6:

England

Description	AC	TY
Civil parish or community	CPC	AA
County	CTY	AA
County electoral division	CED	VA
District	DIS	AA
District ward	DIW	VA
European region	EUR	VA
Greater London Authority	GLA	AA
Greater London Authority Assembly constituency	LAC	VA
London borough	LBO	AA
London borough ward	LBW	VA
Metropolitan county	MTC	AA
Metropolitan district	MTD	AA
Metropolitan district ward	MTW	VA
Non-civil parish or community	NCP	FA
Unitary authority	UTA	AA
Unitary authority electoral division	UTE	VA
Unitary authority ward	UTW	VA
Westminster constituency	WMC	VA

Wales

Description	AC	TY
Civil parish or community	CPC	AA
European Region	EUR	VA
Non-civil parish or community	NCP	FA
Unitary authority	UTA	AA
Unitary authority electoral division	UTE	VA
Welsh Assembly constituency	WAC	VA
Welsh Assembly electoral region	WAE	AA
Westminster constituency	WMC	VA

Scotland

Description	AC	TY
European region	EUR	VA
Scottish Parliament constituency	SPC	VA
Scottish Parliament electoral region	SPE	AA
Unitary authority	UTA	AA
Unitary authority ward	UTW	VA
Unitary authority electoral division	UTE	VA
Westminster constituency	WMC	VA

NOTE 7: *Punctuation is shown in names but not accentuation, for example, the name Westward Ho! Ward includes the exclamation mark, but Ynys Môn is shown as Ynys Mon.*

Attribute Record [ATTREC] 14 for Polygon Record [POLYGON] 31 and Complex Polygon Record [CPOLY] 33

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	14	Record descriptor.
ATT_ID	03:08	I6	Variable number	Unique in the file. Cross reference to {ATT_ID} in Polygon Record or Complex Polygon Record.
VAL_TYPE	09:10	A2	PI	Mnemonic for GLOBAL_POLYGON_ID.
VALUE	11:16	I6	See note 1 below	Unique in dataset ID for polygon.
VAL_TYPE	17:18	A2	HA	Mnemonic for HECTARES attribute.
VALUE	19:30	R12,3	Variable number	Area of polygon or complex polygon.
CONT_MARK	31:31	I1	0	No further records.
EOR	32:32	A1	%	Record terminator.

Record example:

```
14000046PI800046HA0000039468770%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: Valid {VALUE} for PI range is 040000 to 999999.

Geometry Record [GEOMETRY1] 21

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	21	Record descriptor.
GEOM_ID	03:08	I6	Variable number	For link, cross reference from {GEOM_ID} in Chain Record.
GTYPE	09:09	I1	2	Defines as line geometry – a link.
NUM COORD	10:13	I4	Variable number	Number of coordinate pairs.
I X_COORD	14:21	I8	Variable number	Easting offset to 0.1 m.
I Y_COORD	22:29	I8	Variable number	Northing offset to 0.1 m.
I QPLAN	30:30	A1	<S>	Not used.
ATT_ID	*:*	I6	Variable number	For links, cross reference to {ATT_ID} in Attribute Record.
CONT_MARK	*:*	I1	0	No further records
			or 1	or continuation record follows.
EOR	*:*	A1	%	Record terminator.

* = variable integer

Record examples:

```
21000001200020000000000040009 000000000000000 0000010%
21000002200020000000000048909 000000000040009 0000020%
21800002200120000200000050857 0000209600050905 0000235200051086.1%
000000269100051180 0000298200051282 0000343600051455 0000371300051573 1%
000000408800051761 0000429400051866 0000457600052137 0000472600052285 1%
000000492400052503 8000020%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: {X_COORD}, {Y_COORD} and {QPLAN} iterate the number of times shown in {NUM_COORD}.

NOTE 2: Continuation Record(s) [CONTREC] commence with the record descriptor 00.

Line Record [LINEREC] 23

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	23	Record descriptor.
LINE_ID	03:08	I6	Variable number	Line ID, unique in file .
GEOM_ID	09:14	I6	Variable number	Cross reference to {GEOM_ID} in Geometry Record for link.
NUM_ATT	15:16	I2	01	The number of attribute identifiers which follow.
ATT_ID	17:22	I6	Variable number	Cross reference to {ATT_ID} in Attribute Record.
CONT_MARK	23:23	I1	0	No further records.
EOR	24:24	A1	%	Record terminator.

Record example:

```
23800463800463018004630%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: {LINE_ID}, {GEOM_ID} and {ATT_ID} are the same variable number.

Chain Record [CHAIN] 24

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	24	Record descriptor.
CHAIN_ID	03:08	I6	Variable number	Unique in file, ID of Chain. Cross reference to{CHAIN_ID} in Polygon Record.
NUM_PARTS	09:12	I4	Variable number	Number of links for polygon within file, {GEOM_ID} and {DIR} iterate this number of times.
I GEOM_ID	13:18	I6	Variable number	Cross reference to {GEOM_ID} in Geometry Record for link.
I DIR	19:19	I1	1 or 2	Direction start to end or direction end to start.
CONT_MARK	*:*	I1	0 or 1	No further records or continuation record follows.
EOR	*:*	A1	%	Record terminator.

* = variable integer

Record examples:

```
240000730012000032100001210000111000010100000910000311000059100006410000 6311%
00000062100006010000 6110%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```

Template

NOTE 1: Continuation record(s) [CONTREC] commence with the record descriptor 00.

Polygon Record [POLYGON] 31

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	31	Record descriptor.
POLY_ID	03:08	I6	Variable number	Polygon ID, unique in file for administrative unit. Reference to {PART_ID} in Collect Record that is preceded by a value of 31 in {REC_DESC}.
CHAIN_ID	09:14	I6	Variable number	Unique in file ID for Chain. Cross reference to {CHAIN_ID} in Chain Record.
GEOM_ID	15:20	I6	000000	
NUM_ATT	21:22	I2	01	The number of attribute identifiers which follow.
ATT_ID	23:28	I6	Variable number	Cross reference to {ATT_ID} in Attribute Record.
CONT_MARK	29:29	I1	0	No further records.
EOR	30:30	A1	%	Record terminator.

Record example:

```
3180046380046300000018004630%
```

```
|...|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: {POLY_ID}, {CHAIN_ID} and {ATT_ID} are the same variable number.

Complex Polygon Record [CPOLY] 33

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	33	Record descriptor.
CPOLY_ID	03:08	I6	Variable number	Unique ID in file for complex polygons. Reference to {PART_ID} in Collect Record that is preceded by a value of 33 in {REC_DESC}.
NUM_PARTS	09:12	I4	Variable number	Number of iterations of {POLY_ID} and {SIGN}.
I POLY_ID	13:18	I6		Cross reference to {POLY_ID} in Polygon Record.
SIGN	19:19	A1	+ or –	For containing polygons or for contained polygons respectively.
GEOM_ID	*:*	I6	000000	
NUM_ATTS	*:*	I2	01	The number of attribute identifiers which follow.
ATT_ID	*:*	I6	Variable number	Cross reference to {ATT_ID} in Attribute Record.
CONT_MARK	*:*	I1	0	No further records
			or 1	or continuation record follows.
EOR	*:*	A1	%	Record terminator.

* = variable integer

Record example:

```
338008840002800614+800865-000000018008840%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: Continuation record(s) [CONTREC] commence with record descriptor 00.

Collection of Features Record [COLLECT] 34

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	34	Record descriptor.
COLL_ID	03:08	I6	Variable number	Unique identifier.
NUM_PARTS	09:12	I4	Variable number	Number of iterations of {REC_DESC} and [PART_ID] – that is, the number of polygons comprising an administrative area, together with the number of voting areas.
I REC_DESC	13:14	A2	31 or 33 or 34	Polygon; or complex polygon; or collect (for admin area or voting area relationships).
I PART_ID	15:20	I6	Variable number	Cross reference to {POLY_ID} of Polygon Record or {CPOLY_ID} of Complex Polygon Record or the {COLL_ID} of Collect Record.
NUM_ATTS	*:*	I2	01	The number of attribute identifiers which follow.
ATT_ID	*:*	I6	Variable number	Cross reference to {ATT_ID} of Attribute Record for collection of features.
CONT_MARK	*:*	I1	0 or 1	No further records or continuation record follows.
EOR	*:*	A1	%	Record terminator.

* = variable integer

Record example:

```
340029730055310019253400297234002971340029703400296934002968340029673400029661%
003400296534002964340029633400288934002888340028673400286634002865340028641%
003400286334002713340027123400271134002710340027093400270834002707340027061%
003400270534002704340027033400270234002701340027003400269934002698340026011%
003400260034002599340025983400259734002596340025953400250534002504340025031%
003400250234002501340025003400249934002455340024543400245334002452340024511%
00340024503400244901002973 0%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

NOTE 1: Continuation record(s) [CONTREC] commence with the record descriptor 00.

Attribute Description Record [ATTDESC] 40

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	40	Record descriptor.
VAL_TYPE	03:04	A2	See table below	Attribute mnemonic.
FWIDTH	05:07	A3	See table below	Field width.
FINTER	08:12	A5	See table below	Attribute format.
ATT_NAME	13:*	A*	See table below	Attribute name. See note 1 below.
DIVIDER	*:*	A1	\	Divider used to terminate variable length text fields.
CONT_MARK	*:*	I1	0	No further records.
EOR	*:*	A1	%	Record terminator.

Contents of [ATTDESC]

{VAL_TYPE}	{FWIDTH}	{FINTER}	{ATT_NAME}
AI	006	I6	ADMIN_AREA_ID
FC	004	I4	FEAT_CODE
LK	010	I10	GLOBAL_LINK_ID
NM	<3S>	A*	NAME (see note 1 below)
OP	007	A7	CENSUS_CODE
PI	006	I6	GLOBAL_POLYGON_ID
HA	012	R12,3	HECTARES
AC	003	A3	AREA_CODE
NA	012	R12,3	NON_INLAND_AREA
NB	003	A3	NON_TYPE_CODE
TY	002	A2	AREA_TYPE

* = variable integer

NOTE 1: Punctuation is shown in names but not accentuation, for example, the name Westward Ho! Ward includes the exclamation mark, but Ynys Môn is shown as Ynys Mon.

Record examples:

```
40LK010I10  GLOBAL_LINK_ID\0%
40AI006I6   ADMIN_AREA_ID\0%
40PI006I6   GLOBAL_POLYGON_ID\0%
40NA012R12,3NON_INLAND_AREA\0%
40HA012R12,3HECTARES\0%
40NM   A*   NAME\0%
40OP006A6   CENSUS_CODE\0%
40TY002A2   AREA_TYPE\0%
40FC004I4   FEAT_CODE\0%
40AC003A3   AREA_CODE\0%
40NB003A3   NON_TYPE_CODE\0%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
1234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

Code List Record [CODELIST] 42

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	42	Record descriptor.
FIELD_NAME	03:12	A10	<10S>	Not used.
VAL_TYPE	13:14	A2	AC, TY or NB	Two letter mnemonic.
FINTER	15:19	A5	A2<3S> or A3<3S>	Format of CODE_VAL, where <3S> denotes three spaces following the text.
NUM_CODE	20:22	I3	Variable number	Number of codes defined in list.
CODE_VAL	23:*	A*		The code.
DIVIDER	*:*	A1	\	Divider used to terminate variable length text fields.
CODE_DES	*:*	A*		Description of the code.
DIVIDER	*:*	A1	\	Divider used to terminate variable length text fields.
CONT_MARK	*:*	I1	0 or 1	No further records or continuation record follows.
EOR	*:*	A1	%	Record terminator.

* = variable integer

Record examples:

```
42          ACA3    028CPC\CIVIL PARISH OR COMMUNITY\CPW\CIVIL PARISH OR COMMU1%
00NITY WARD\CTY\COUNTY\CED\COUNTY ELECTORAL DIVISION\DIS\DISTRICT\DIW\DISTRIC1%
00T WARD\EUR\EUROPEAN REGION\GLA\GREATER LONDON AUTHORITY\LAC\GREATER LONDON 1%
00AUTHORITY ASSEMBLY CONSTITUENCY\LBO\LONDON BOROUGH\LBW\LONDON BOROUGH WARD\1%
00MTC\METROPOLITAN COUNTY\MTD\METROPOLITAN DISTRICT\MTW\METROPOLITAN DISTRICT1%
00 WARD\NAT\NATION\NCP\NON CIVIL PARISH OR COMMUNITY\NPW\NON CIVIL PARISH OR 1%
00COMMUNITY WARD\PSD\PETTY SESSIONAL DIVISION\RLM\REALM\SPC\SCOTTISH PARLIAME1%
00NT CONSTITUENCY\SPE\SCOTTISH PARLIAMENT ELECTORAL REGION\SEA\SEA\UTA\UNITAR1%
00Y AUTHORITY\UTE\UNITARY AUTHORITY ELECTORAL DIVISION\UTW\UNITARY AUTHORITY 1%
00WARD\WAC\WELSH ASSEMBLY CONSTITUENCY\WAE\WELSH ASSEMBLY ELECTORAL REGION\WM1%
00C\WESTMINSTER CONSTITUENCY\0%
42          TYA2    005AA\CIVIL ADMINISTRATION AREA\VA\CIVIL VOTING AREA\FA\FI1%
00LLER AREA\JA\JUDICIAL AREA\TA\TOPOGRAPHIC AREA\0%
42          NBA3    006CPC\CIVIL PARISH OR COMMUNITY\CPW\CIVIL PARISH OR COMMU1%
00NITY WARD\CTY\COUNTY\CED\COUNTY ELECTORAL DIVISION\UTE\UNITARY AUTHORITY EL1%
00ECTORAL DIVISION\UTW\UNITARY AUTHORITY WARD\0%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

Volume Termination Record [VOLTERM] 99

Field	Position	Format	Content	Description
REC_DESC	01:02	A2	99	Record descriptor.
FREE_TEXT	03:*	A*	See note1 below	Message.
CONT_VOL	*:*	I1	0	No further volumes
			or 1	or continuation volume follows.
EOR	*:*	A1	%	Record terminator.

* = variable integer

NOTE 1: If there are further volume(s) to follow, the {FREE_TEXT} field contains the following message:
```
End Of Volume (nn). Transfer Set Continues On Volume (nn+1)
```

If there are no further volumes, the {FREE_TEXT} field contains following the message:
```
End Of Transfer Set
```

Record examples:

```
99End Of Volume 01 Transfer. Set Continues On Volume 02 1%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

```
99End Of Transfer Set1%
```

```
....|....1....|....2....|....3....|....4....|....5....|....6....|....7....|....8
12345678901234567890123456789012345678901234567890123456789012345678901234567890
....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|....|
```
Template

Appendix A   Glossary

absolute coordinates
A coordinate pair or triplet measured directly from the origin of the coordinate system in which it lies and not to any other point in the system.

accuracy
The closeness of the results of observations, computations or estimates to the true values or the values accepted as being true. Accuracy relates to the exactness of the result, and is the exactness of the operation by which the result is obtained.

administrative area
A blanket term used by Ordnance Survey to refer to all public administrative areas, specifically local government management and electoral areas.

administrative unit
A single administrative area.

alphanumeric
Information in character form.

American Standard Code for Information Interchange (ASCII)
A 7-bit code for encoding a standard character set.

area
A spatial extent defined by circumscribing lines that form a closed perimeter that does not intersect itself.

attribute
An attribute is a property of an entity, usually used to refer to a non-spatial qualification of a spatially referenced entity. For example, a name or descriptive code indicating what an entity represents or how it should be portrayed.

attribute class
A specific group of attributes, for example, those describing measure, serviceability, structure or composition.

attribute code
An alphanumeric identifier for an attribute type.

attribute value
A specific quality or quantity assigned to an attribute.

boundary
Boundaries define the areas of the various national, local government and some European authorities.

CAD
Computer-aided design.

centroid
The position of the centre of gravity of an entity, often used to reference polygons.

character
A distinctive mark; an inscribed letter; one of a set of writing symbols.

chain
A closed loop of links bounding a polygon.

character string
A one-dimensional array of characters held either in memory or in another storage medium.

coding
Allocation of a feature code to a feature being created from constituent construction data – points and/or segments; with optional linking to an existing feature of the same feature code.

compact disc – read-only memory (CD-ROM)
A data storage medium. A 12 cm disc read by laser.

coordinate pair
A coordinate pair is an easting and a northing.

coordinates
Pairs of numbers expressing horizontal distances along original axes. Alternatively triplets of numbers measuring horizontal and vertical distances. Row and column numbers of pixels from raw imagery are not considered coordinates for the purpose of the standard.

continuation mark
A logical record may contain more data than can be held in a single physical record. The physical record contains a continuation mark (the penultimate character of the record in NTF) to indicate whether more data is to be found in a continuation record.

continuation record
A specific NTF term. A continuation record is used where space does not allow one logical record to be contained wholly within one physical record.

copyright
Copyright is a legal property right which enables the creator and/or owner of an original work to protect it from unauthorised use. Through the *Copyright, Designs and Patents Act 1988*, Crown copyright continues to subsist in all Ordnance Survey products until the end of the period of 50 years from the end of the year in which they were published, and in the case of data from the end of the year in which it was extracted from the Ordnance Survey database. Crown copyright is vested in The Controller of Her Majesty's Stationery Office, who has delegated powers to the Director General, Ordnance Survey for the administration of copyright in publications and data, including the determination of terms and conditions under which permission for their reproduction is given.

currency
An expression of the up-to-dateness of data.

data
A representation of facts, concepts or instructions in a formalised manner suitable for communication, interpretation or processing.

database
An organised, integrated collection of data stored so as to be capable of use in relevant applications, with the data being accessed by different logical paths. Theoretically it is application-independent, but in practice rarely so.

database (NTF)
A group of one or more sections with common characteristics defined in a data dictionary. Information and data being transferred in a transfer set is deemed to belong to one or more databases. These may be databases in the literal sense, or may be collections of data from a common source, such as a national coverage of large-scale mapping.

data capture
The encoding of data. In the context of digital mapping this includes map digitising, direct recording by electronic survey instruments, and the encoding of text and attributes by whatever means.

data format
A specification that defines the order in which data is stored or a description of the way data is held in a file or record.

data model
An abstraction of the real world which incorporates only those properties thought to be relevant to the application or applications at hand. The data model would normally define specific groups of entities and their attributes, and the relationship between these entities. A data model is independent of a computer system and its associated data structures. A map is one example of an analogue data model.

data quality
Attributes of a dataset which define its suitability for a particular purpose, for example, completeness, positional accuracy, currency, logical structure and so on.

dataset
Data as supplied in a particular format to customers, whether internal or external to Ordnance Survey.

data structure
The defined logical arrangement of data as used by a system for data management; a representation of a data model in computer form.

derived map
A map which has been produced by reference to other source maps, rather than directly from a survey.

digital
Data which is expressed as numbers (digits) in computer readable form is said to be digital.

distinctive name
A text feature consisting of text string(s) which form(s) a proper name.

eastings
See rectangular coordinates.

entity
Something about which data is stored in a databank or database. For example, boundary and name. The data may consist of relationships, attributes, positional and shape information and so on. Often synonymous with feature.

explicit
Data that is directly represented in digital form. For example, the relationship between two objects is explicit if recorded by such means as pointers and does not have to be deduced by further analysis of the data.

feature
An item of detail within a map which can be either a point and/or symbol, text or line.

feature (NTF)
The formal representation of an object. A simple feature (or primitive) exists in NTF when a point, line, complex line, polygon, text string or external record is created, with or without associated attribute records. A complex feature exists in NTF when a group of simple and/or complex feature records are combined in a complex polygon or collection of features record, with or without associated attribute records.

feature classification record
A specific, named NTF record [FEATCLASS] which lists the feature codes in use in the current database.

feature code (FC)
An alphanumeric attribute code used in digital map data to describe each feature in terms either of the object surveyed or its representation on the map (or both). A feature code is broadly equivalent to a layer in DXF.

feature record
The logical information, both spatial and attribute, describing a feature or entity.

feature serial number (FSN)
A number used as a feature identifier usually allocated on a sequential basis.

field
A specified part of a record containing a unit of data , such as the date of digitising. The unit of data may be a data element or a data item. In NTF a field is a subdivision of a physical record. Every field has a name and a predefined interpretation.

file
An organised collection of related records. The records on a file may be related by a specific purpose, format or data source, and the records may or may not be arranged in sequence. A file may be made up of records, fields, words, bytes, characters or bits.

font
The style of text character used.

format
The specified arrangement of data. For example, the layout of a printed document, the arrangement of the parts of a computer instruction, the arrangement of data in a record.

geographical information system (GIS)
A system for capturing, storing, checking, integrating, analysing and displaying data that is spatially referenced to the Earth. This is normally considered to involve a spatially referenced computer database and appropriate applications software.

header
See map header.

implicit
Data that is not directly described in a digital form. The relationship between two adjacent objects may be implicit in that they are within a specified distance of each other. To determine this, further processing is required.

layer
A subset of digital map data, selected on a basis other than position. For example, one layer might consist of all features relating to counties and another to wards. Also known as a level.

level
A level corresponds to a single type of administrative unit, for example a ward or a district, and is conceptual in form. See also layer.

line
A series of connected coordinated points forming a simple feature with homogeneous attribution.

line feature
The spatial abstraction of an object in one dimension. Lines may intersect with other lines. They are defined as a series of two or more coordinate pairs and may be curved or straight. Curved lines consist of a series of very short straight line segments. As an object abstraction a line has no width.

line segment
A vector connecting two coordinated points.

line and/or link collect
Whenever an update occurs the original boundary line is broken into many links, due to the need to retain the old part of the boundary. This entity allows the original line to be recreated using the current links. There are as many occurrences of this entity for a given line as there are links that make it up. Any query concerning the history of a line, for example, to recreate a boundary line at a point in time; needs to retrieve all the relevant occurrences and join the links together to form the geometry of the original line. This entity should relate to the NTF Collect record.

link or edge
Links are the representation of line features. They are made up of one or more consecutive non-intersecting link segments with common attributes between two terminating nodes. Links have no connection with other links except at the start or end, via common (shared) terminating nodes (points). All links contain their terminating coordinates. Links may form the boundaries of polygons and may be shared between polygons.

link and node data
A form of vector data in which linear features are represented as links. Links are terminated where they intersect other links. These intersection points, and link ends, may carry nodes whose feature records express the geometric relationships between links.

link and node structure
A data structure in which links and nodes are stored with cross referencing.

link segment
A straight line or vector between two coordinated points.

logical record
A logical record contains all the information relating to a data entity (for example, a feature record). A logical record may comprise one or more physical records.

map generalisation
A reduction in map detail, so that the information remains clear and uncluttered when the map scale is reduced. May also involve resampling to larger spacing, and/or a reduction in the number of points in a line.

map header
Data at the start of the digital map file describing that data. It may contain information on the source and history of the geometric data within the map and the coordinate system in use, as well as holding information essential to the management of Ordnance Survey's digital mapping system.

map scale
The ratio between the extent of a feature on the map and its extent on the ground, normally expressed as a representative fraction, such as 1:1250 or 1:10 000.

name
The proper name or label of an object (real world) or feature (object abstraction). The descriptive name might consist of one or more text strings or be an attribute of the object or object abstraction.

National Grid
A unique referencing system which can be applied to all Ordnance Survey maps of Great Britain (GB) at all scales. It is used by Ordnance Survey on all post-war mapping to provide an unambiguous spatial reference in Great Britain for any place or entity whatever the map scale. The National Grid is defined by the OSGB36® spheroid.

NTF
A format designed in 1988 specifically for the transfer of spatial information; it is published as British Standard BS 7567 and is administered by the British Standards Institution (see chapter 5 NTF explained).

node
An object representation of a point which either does not form any part of a link (isolated node or polygon seed point); or the representation of a point at the start or end of a link (terminating node). The position of a node is defined by a single coordinate pair – which is repeated within all links logically connected at that node and/or containing it. A node is only deleted if the link containing it as a terminating node is deleted.

northings
See rectangular coordinates.

object
A collection of entities which form a higher level entity within a specific data model.

object (real world)
A recognisable discrete part of the real world.

operative date
The date the order was made not necessarily the day it becomes 'live and in-use'.

origin
The zero point in a system of rectangular coordinates.

physical record (NTF)
A physical record may be a fixed length containing 80 characters, or variable length containing up to 80 characters.

point and line data
A form of vector data designed for map production in which all map features are designated as points, lines or text. Point and line data does not carry the topological relationships between features.

point feature
A zero-dimensional spatial abstraction of an object with its position defined by a coordinate pair. Points are represented by nodes which may be isolated or part of a link (terminating). Points may also be represented by symbols which may have attributes such as rotation and size.

polygon
Polygons are a representation of areas. A polygon is defined as a closed line or perimeter completely enclosing a contiguous space and is made up of one or more links. At least one node occurs on the perimeter of a polygon where the bounding link completes the enclosure of the area. There may be many nodes connecting the bounding links of a polygon. Links may be shared between polygons. Polygons may wholly contain other polygons; or be contained within other polygons. Each may contain a single isolated node (seed point) which identifies the polygon.

polygon boundary
The link(s) which enclose a polygon, projected into the horizontal plane. A chain.

polygon point
See seed point.

positional accuracy
The degree to which the coordinates define a point's true position in the world, directly related to the spheroid and/or projection on which the coordinate system is based.

precision
The exactness with which a value is expressed, whether the value be right or wrong.

record
A set of related data fields grouped for processing.

rectangular coordinates
Also known as X-Y coordinates and as eastings and northings. These are two-dimensional coordinates which measure the position of any point relative to an arbitrary origin on a plane surface (for example, a map projection).

relative accuracy
The measure of the internal consistency of the positional measurements in a dataset. For many local area purposes, for example, records of utility plant, relative accuracy is more important than absolute accuracy. In this case, accurate measurement of offsets from fixed points is required rather than knowledge of the true position in space.

resolution
A measure of the ability to detect quantities. High resolution implies a high degree of discrimination but has no implication as to accuracy. For example, in a collection of data in which the coordinates are rounded to the nearest metre, resolution is 1 metre, but the accuracy may be $\pm$ 5 metres or worse.

section
In NTF terminology, a subdivision of a database. In Ordnance Survey terms this equates to a single map unit (that is a digital map file or a tile).

seed point
A coordinated point (isolated node) within an area (usually a defined polygon) to which alphanumeric information may be attached as an attribute, for example, a name or feature code. Also called a polygon seed, area seed or representative point.

segment
A chord defined by two consecutive coordinates in a line string.

source scale
The scale of the source information from which the map was digitised. The scale of survey for a basic scale map, or the scale of the source map for a derived map.

spatial data
Data which includes a reference to a two- or three-dimensional position in space as one of its attributes. It is used as a synonym for geometric data.

Statutory Instrument
An order made by a Minister under delegated power from Parliament. Contains changes to boundary information, the alignment, type or relationship to a named area (amalgamation) or a change of name to an area are made by order.

string
1   A set of items which can be arranged into a sequence according to a rule.
2   A sequence of coordinate pairs or triplets making up a line or a link.

structured data
Data within which collections of features (of any type) form objects. Topographically structured data also contains topological information, defining the relationships between features and objects.

terminator
A character, character string, field or record used to signal the end of a record or section or volume or database.

topographic database
A database holding data relating to physical features and boundaries on the surface of the Earth.

topography
The study of the physical features of the Earth. A topographic map's principal purpose is to portray and identify the features of the Earth.

topology
The study of the properties of a geometric figure which are not dependant on position, such as connectivity and relationships between lines, nodes and polygons.

transfer format
The format used to transfer data between computer systems. In general usage this can refer not only to the organisation of data, but also to the associated information, such as attribute codes, which are required in order to successfully complete the transfer.

transfer medium
The physical medium on which digital data is transferred from one computer system to another. For example, CD-ROM.

transfer set
A specific NTF term for the data, together with its supporting information, which the customer receives.

update
The process of adding to and revising existing digital map data to take account of change.

vector
A straight line joining two data points.

vector data
Positional data in the form of coordinates of the ends of line segments, points, text positions and so on.

volume
A physical unit of the transfer medium, that is, a single disk, a single cartridge or a single tape.

Appendix B Statutory Instruments (SIs) and non-SI changes in May 2005 Boundary-Line release

England

County	Boundaries D=District/ U/A=Unitary Authority/ LB= London Borough/ Met Dist= Metropolitan District	Op date	SI year (If applicable)	SI number (If applicable)	Comments
BEDFORDSHIRE		05-May-05	2004	3245	ED Order
DERBYSHIRE		05-May-05	2004	2811	ED Order
DEVON		05-May-05	2004	2812	ED Order
DORSET		05-May-05	2004	3250	ED Order
EAST SUSSEX		05-May-05	2004	3247	ED Order
ESSEX		05-May-05	2004	2813	ED Order
GLOUCESTERSHIRE		05-May-05	2004	2814	ED Order
HAMPSHIRE		05-May-05	2004	3248	ED Order
KENT		05-May-05	2004	2815	ED Order
NOTTINGHAMSHIRE		05-May-05	2004	2816	ED Order
OXFORDSHIRE		05-May-05	2004	3251	ED Order
SHROPSHIRE		05-May-05	2004	2817	ED Order
STAFFORDSHIRE		05-May-05	2004	2818	ED Order
SUFFOLK		05-May-05	2004	3252	ED Order
SURREY		05-May-05	2004	2819	ED Order
WARWICKSHIRE		05-May-05	2004	2820	ED Order
WILTSHIRE		05-May-05	2004	2821	ED Order
	STOCKTON-ON-TEES	05-May-05	2003	2506	Ward Order
STAFFORDSHIRE/ WORCESTERSHIRE	SOUTH STAFFORDSHIRE/ WYRE FOREST	01-May-05			Amend County Bdy
LANCASHIRE	FYLDE	01-Apr-05	2004	2047	Creates new Parish of Saint Anne's on the Sea CP
NORTHAMPTONSHIRE	KETTERING	01-Apr-05	2001	3356	ED Order
	CITY OF PETERBOROUGH	01-May-05			Amend Ward Bdy

County	Boundaries D=District/ U/A=Unitary Authority/ LB= London Borough/ Met Dist= Metropolitan District	Op date	SI year (If applicable)	SI number (If applicable)	Comments
CORNWALL	PENWITH	01-May-05			Amend various Bdys
WILTSHIRE	KENNET	01-May-05			Amend Parish Bdy
CORNWALL	NORTH CORNWALL/CARADON	01-May-05			Amend various Bdys
KENT	CANTERBURY/DOVER	01-May-05			Amend District and Westminster Bdy
CORNWALL	CARRICK	01-May-05			Amend various Bdys
CORNWALL	RESTORMEL	01-May-05			Amend various Bdys
BUCKINGHAMSHIRE	CHILTERN	01-May-05			Amend Ward Bdy
GLOUCESTERSHIRE	STROUD	01-May-05			Amend CP Bdy
DERBYSHIRE	HIGH PEAK	01-May-05			Change Chapel En Le Frith CP to Chapel-en-le-Frith CP
CORNWALL	CARADON	01-May-05			Amend various Bdys
CORNWALL/DEVON	CARADON, SOUTH HAMS, WEST DEVON and CITY OF PLYMOUTH	01-May-05			Amend various Bdys
SUFFOLK	SUFFOLK COASTAL	01-Apr-05	2004	2586	Parish Order
LEICESTERSHIRE	MELTON	01-Apr-05	2004	2587	Parish Order
NORTH YORKSHIRE	RICHMONDSHIRE	01-May-05			Amend Ward Bdy
BUCKINGHAMSHIRE	WYCOMBE	01-May-05			Amend Ward Bdy
BUCKINGHAMSHIRE	WYCOMBE	01-May-05			Amend Parish Bdy
NOTTINGHAMSHIRE	BASSETLAW	01-May-05			Amend Parish Bdy
ESSEX	HARLOW	01-May-05			Amend Ward and ED Bdy
	SANDWELL/DUDLEY	01-May-05			Amend Met District and Westminster Bdy plus Ward Bdy
ESSEX	MALDON	01-May-05			Amend MHW
	ROTHERHAM	01-May-05			Amend Parish
WARWICKSHIRE	STRATFORD-UPON-AVON	01-May-05			Amend Parish and Ward Bdy
	BRADFORD	01-May-05			Amend Parish

County	Boundaries D=District/ U/A=Unitary Authority/ LB= London Borough/ Met Dist= Metropolitan District	Op date	SI year (If applicable)	SI number (If applicable)	Comments
	NEWCASTLE UPON TYNE/ NORTH TYNESIDE	01-May-05			Amend District Bdy in two places
	BOLTON	01-May-05			Amend Ward Bdy
	TRAFFORD	01-May-05			Amend Ward Bdy
	BRADFORD/KIRKLEES	01-May-05			Amend District and Ward Bdys
HERTFORDSHIRE	NORTH HERTFORDSHIRE	01-Apr-05	2004	3195	Amend Parish
HAMPSHIRE	BASINGSTOKE AND DEANE	26-Nov-04	2004	3106	Amend Ward Bdy
HAMPSHIRE	BASINGSTOKE AND DEANE	01-May-05			Amend Parish and Ward Bdy
LANCASHIRE	WYRE	01-May-05			Correct name from Nether Wyersdale CP to Nether Wyresdale CP
CORNWALL	RESTORMEL	01-Jul-00			Parish name change from Tywardreath CP to Tywardreath and Par CP
NORFOLK	SOUTH NORFOLK	01-May-05			Amend Ward Bdy
CAMBRIDGESHIRE	FENLAND	01-May-05			Amend Ward Bdy
SOMERSET	WEST SOMERSET	01-May-05			Amend County, District, CC, CP, ED and Ward Bdys
WILTSHIRE	SALISBURY	01-May-05			Amend CP,ED and Ward Bdys
SOMERSET/DEVON	WEST SOMERSET/NORTH DEVON/ TAUNTON DEANE	01-May-05			Amend County, District, CC, CP, ED and Ward Bdys
KENT	SWALE	01-May-05			Amend Ward Bdy

Wales

U/A=Unitary Authority	Op date	SI year (If applicable)	SI number (If applicable)	Comments
CASTELL-NEDD PORT TALBOT	01 May 05			Change capital N of Castell – Nedd Port Talbot – Neath Port Talbot to small n in 'Nedd'
TOR-FAEN – TORFAEN	01 May 05			Change Capital F of Tor-Faen – Torfaen to small f in 'Tor-faen'
POWYS	01 April 05	2004	2747	Community Order
CASTELL-NEDD PORT TALBOT/POWYS	01 April 05	2004	2746	Unitary Order
SIR YNYS MON – ISLE OF ANGLESEY	01 May 05			Amendments to Coast

Scotland

U/A=Unitary Authority	Op date	SI year (If applicable)	SI number (If applicable)	Comments
ANGUS	01-May-05			Adjust boundaries at MLW
HIGHLAND	01-May-05			Adjust boundaries at MLW
ORKNEY ISLANDS	01-May-05			Adjust boundaries at MLW
MORAY	01-May-05			Adjust boundaries at MLW
HIGHLAND	01-May-05			Adjust boundaries at MLW
DUMFRIES AND GALLOWAY	01-May-05			Adjust boundaries at MLW
SOUTH AYRESHIRE	01-May-05			Adjust boundaries at MLW
NORTH AYRESHIRE	01-May-05			Adjust boundaries at MLW
ARGYLL AND BUTE	01-May-05			Adjust boundaries at MLW
NORTH AYRESHIRE	01-May-05			Adjust boundaries at MLW
EAST LOTHIAN	01-May-05			Adjust boundaries at MLW

Appendix C   Changes not incorporated into the 2005 Boundary-Line update

Residual Statutory Instruments (SIs)

The list below contains the SI's that are not included in the May 2005 dataset. All residual signed off SI's will be incorporated into the October 2005 dataset, on official confirmation.

County	District/UA/LB/Met Dist	Order	Operative date
BUCKINGHAMSHIRE		ED (Enumeration District)	05-May-2005
CAMBRIDGESHIRE		ED (Enumeration District)	05-May-2005
CORNWALL		ED (Enumeration District)	05-May-2005
DURHAM		ED (Enumeration District)	05-May-2005
LANCASHIRE		ED (Enumeration District)	05-May-2005
LEICESTERSHIRE		ED (Enumeration District)	05-May-2005
NORFOLK		ED (Enumeration District)	05-May-2005
NORTH YORKSHIRE		ED (Enumeration District)	05-May-2005
WEST SUSSEX		ED (Enumeration District)	05-May-2005
WORCESTERSHIRE		ED (Enumeration District)	05-May-2005
HAMPSHIRE	BASINGSTOKE AND DEANE	CP (parish)	01-Apr -2005
LINCOLNSHIRE	EAST LINDSEY	CP (parish)	01- Apr-2005
SHROPSHIRE	SHREWSBURY AND ATCHAM	CP (parish)	01- Apr-2005
STAFFORDSHIRE	STAFFORD	CP (parish)	01- Apr-2005

Scotland and Wales

SCOTLAND (All UAs affected)	WESTMINSTER CONST	NEXT ELECTION 2005
WALES (All U As affected)	WESTMINSTER CONST	NEXT ELECTION 2005

Boundary-Line only represents the boundaries that are currently operational. Future dated or non signed off SI's will not be included, this ensures that the boundary information currency is correct at the time of the dataset release. Also some SI's that are too late for inclusion but are operational in May, would be included in the next suitable release

Appendix D   Product and service performance report form

Ordnance Survey welcomes feedback from its customers about Boundary-Line.

If you would like to share your thoughts with us, please print a copy of this form and when completed post or fax it to the address below.

Your name: .... Phone:...

Organisation: .... Fax: ....

Address: .... Email: ....

.... Quotation or order reference: ....

....

Postcode: ....

Please record your comments or feedback in the space below. We will acknowledge receipt of your form within 3 working days and provide you with a full reply or a status report within 21 working days.

If you are posting this form, please send it to:

Boundary-Line Product Manager, Ordnance Survey, Romsey Road, SOUTHAMPTON, SO16 4GU.

Fax: 023 8079 2615