Ordnance Survey®

OS VectorMap™ Local

User guide and technical specification

OS VectorMap Local

User guide

Contents

v1.2 – 02/2011

D05300_36

Preface

This user guide (hereafter referred to as the guide) is designed to provide an overview of OS VectorMap Local (hereafter referred to as the product). It gives guidelines and advice on how a customer might derive the maximum benefit from the product. It assumes a general knowledge of geographic information. If you find an error or omission in this guide, or otherwise wish to make a comment or suggestion as to how we can improve the guide, please contact us at the address shown below under contact details or complete the product and service performance report form at annexe B and return it to us.

Contact details

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

Customer Service Centre
Ordnance Survey
Adanac Drive
SOUTHAMPTON
SO16 0AS

General enquiries (calls charged at local rate): +44 (0)8456 05 05 05

Dedicated Welsh Language HelpLine: 08456 05 05 04

Textphone (deaf and hard of hearing users only please): +44 (0)23 8005 6148

customerservices@ordnancesurvey.co.uk

www.ordnancesurvey.co.uk

This document has been screened in accordance with the requirements set out in Ordnance Survey's Equality Scheme. If you have difficulty reading this information in its current format and would like to find out how to access it in a different format (Braille, large print, computer disk or in another language), please contact us on: +44 (0)8456 05 05 05.

Use of the product

The terms and conditions upon which the product, including this guide, is made available to you and your organisation are contained in the customer contract made between you and Ordnance Survey. If there is an inconsistency between the terms of your customer contract and this guide, then the terms of your customer contract prevail. If you or your organisation has not signed a valid current customer contract then you are not entitled to use the product.

Purpose and disclaimer

This guide is provided for guidance only and does not constitute any warranty, representation, undertaking, commitment or obligation (express or implied) about the product or its suitability for any particular or intended purpose. Any warranties, representations, undertakings, commitments and obligations given by Ordnance Survey about the product and/or its suitability for any particular or intended purpose are set out in your customer contract. It is your responsibility to ensure that this product is suitable for your intended purpose.

Ordnance Survey does not accept any liability (whether for breach of contract, negligence or otherwise) for any loss or liability you or any third party may suffer in relying on this guide and any guidance, suggestion, advice or explanation provided in it. Any liability that Ordnance Survey has to you in relation to the product, its supply, use, accuracy, data supplied, functionality or any other liability arising out of or in connection with the product is limited as set out in your customer contract.

We may change the information in this guide at any time without notice.

We do not accept responsibility for the content of any third-party websites referenced or accessed in or through this guide, any contractual documentation, and/or the Ordnance Survey website.

Copyright in this guide

Data copyright and other intellectual property rights

Trademarks

Back-up provision of the product

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

Using this guide

The documentation is supplied in portable document format (PDF) only. Free Adobe® Acrobat Reader® software, which displays the guide, incorporates search and zoom facilities and allows you to navigate within. Hyperlinks are used to navigate between associated parts of the guide and to relevant Internet resources by clicking on the blue hyperlinks and the table of contents.

If you are unfamiliar with any words or terms used and require clarification please refer to the glossary at the end of the document.

Chapter 1 Introduction to OS VectorMap Local

Using the user guide

This user guide contains basic information you will need to understand, use and manage OS VectorMap Local. The OS VectorMap Local technical specification contains detailed technical information and data format specification.

Annexe A in the user guide provides a list of road abbreviations.

Annexe B in the user guide is a product and service performance report form for you to submit any comments on OS VectorMap Local.

OS VectorMap Local overview

This new release v1.1 has some changes to the feature codes; these are listed below:

New feature codes and descriptions:

- 15403 - 'Index contour label'
- 15409 - 'Standard contour label'
- 15608 - 'Sea polygon'
- 15609 - 'Inland water polygon
- 15792 - 'Road Tunnel',

Obsolete feature codes

- 15103 - ‘Telephone line’
- 15402 - 'Contour label'
- 15601 - ‘Flat water polygon’

15602 - ‘River water polygon’

This is an example of unstyled GML data:

OS VectorMap Local is a series of 5 km by 5 km tiles of simple vector GML data covering the whole of Great Britain that has been designed for creating graphical mapping. The product can be used as mapping in its own right or can be used to provide a flexible geographic context reference for customers' overlay information.

As well as the vector dataset, a number of output styles are suggested. These demonstrate the versatility of the dataset to be styled in the appropriate way to support a multitude of different geographic purposes.

The main characteristics of the dataset:

- Data is represented by points, lines, polygons, and text.
- Feature classes are differentiated by feature descriptions and feature code (FC) attributes.
- No explicit topology other than some polygon features.
- Tiles are complete in themselves; all text falls within the tile body and all polygons that cross tile borders are closed along the tile edges.
- Road names and Department for Transport (DfT) numbers held as attributes of road alignment features.
- The road casings are feature-coded and cartographically-positioned road text is included as points and feature-coded (the road text as displayed on 1:10 000 Scale Raster products).
- In addition, additional coverage of road names and numbers are included as points and feature coded.
- There is a FC that represents urban extent.
- Tiles are visually edgematched.
- Artistic ornament, such as large slope symbols, scree, flat rock and so on, are held as vectors and will render as displayed on 1:10 000 Scale Raster products.
- Content includes contours with the values held as text labels.
- No persistent feature identifiers.
- No feature change history.
- Update is managed by complete tile replacement.

Applications of OS VectorMap Local

The purpose of OS VectorMap Local data is to support a wide range of customer applications that utilise geographic information. These may include:

- Banking and insurance
- Land and property
- Consumer website services
- Navigation products
- Cartographic representation
- Urban extents

OS VectorMap Local topographic features codes are representations of real-world objects, including buildings, roads, railways, rivers and land area. The data also includes non-topographic features such as administrative and electoral boundaries, cartographic text and symbols.

What you need to use OS VectorMap Local

Computer hardware

This product may be used on a wide range of hardware platforms (provided sufficient memory and storage facilities are available), varying from desktop PCs using GIS or CAD to mainframe computers with specialised translators and applications.

Computer software

OS VectorMap Local is supplied as inert data in GML format and does not include software for data manipulation.

GML is an open standard and the data will need to be translated into the appropriate format for use within a GIS application.

Supply format

OS VectorMap Local is available as:

- GML v2.1.2

Supply media

OS VectorMap Local can be ordered from the Ordnance Survey website. This allows you to order your initial data supply and update (change-only or full resupply as tiles) and obtain price estimates.

Both initial supply and updates are available on CD and DVD. For initial supply we recommend that customers select CD or DVD (single side, 4.6 GB) due to the larger volumes of data involved.

This data is designed to be kept up to date by full tile resupply.

Data will be compressed using the gzip compression method. The data is not encrypted.

Coverage and file sizes

The national dataset is maintained and supplied as 5 km by 5 km tiles of data.

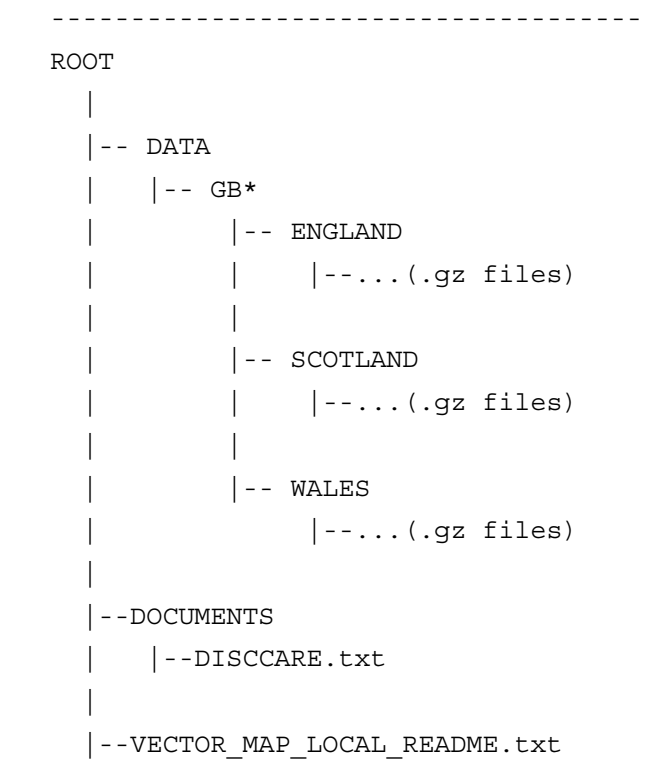
There are 10 587 tiles in the product.

File size estimates can vary from about 3.5 Kb compressed to about 3 Mb (compressed). A full national supply will be approximately 9.2 Gb compressed.

Compression rates vary, dependant on the size and content of a tile.

Supply structure

2a EXAMPLE - GB



A typical 5 km by 5 km tile with Standard Style 1 applied

This defines OS VectorMap Local in a more subtle colour scheme than is traditional and is intended to provide a suitable context map for data to be shown, from approximately 1:5 000 to 1:15 000 scale. Road casings are shown to a minimum width with selected road names and numbers cartographically positioned – as depicted on 1:10 000 Scale Raster. Contours and contour labels are also included. DfT classified roads have colour fill.

Chapter 2 OS VectorMap Local explained

Currency

The product is updated via a 1:10 000 scale revision programme. The revision of OS VectorMap Local is determined by assessing the following factors:

- known surveyed changes, captured by the field surveyor;
- change indicated by photogrammetric survey (which includes rural survey sweep); and
- consideration given as to how long it has been since an area was last revised.

Priority is given to prestige sites categorised as significant items of change, such as major road construction projects.

All tiles in the revision programme are fully revised, which means that all surveyed change is included, not just significant items of change.

Completeness

During production many checks are undertaken to ensure that data supplied to customers are both accurate and complete. During digital manipulation in creating the data, all sources of that data are checked for conformance to specification.

These quality control checks take the form of:

- Visual checks by operators.
- Data will be tested against the product specification.
- Testing will be carried out on a selection of tiles from a full national set.

Coordinate resolution

All coordinates are stored to two decimal places.

Generalisation

The detail within OS VectorMap Local has been generalised when compared to detail within OS MasterMap® Topography Layer. Map generalisation is the process of reducing the scale and complexity of map detail whilst maintaining the important elements and characteristics of the location.

- **Selection/omission:** some features that appear at larger scales are not selected at the smaller scales. For example, many small buildings that appear in OS MasterMap Topography Layer are omitted from OS VectorMap Local.
- **Simplification:** simplification can take a number of forms in OS VectorMap Local. It can be line simplification, for example, a very winding stream could have the number of data points that represent it reduced; railway lines that are represented in OS MasterMap Topography Layer as two rails are depicted in OS VectorMap Local as a single centre line; the number of vegetation classifications are reduced; small juts and recesses on buildings are either omitted or enlarged to maintain the basic shape.
- **Exaggeration:** features that are small but are too important to a particular landscape to be omitted are enlarged. For example, rural buildings are often enlarged to a minimum size rather than being omitted; narrow roads are widened to a minimum distance to enable road text to be shown within the road casings – see Roads on page 11.
- **Aggregation:** aggregation is the combining of a number of small features to make a larger one. There is little aggregation carried out for OS VectorMap Local. Some railway sidings' centrelines are aggregated. Detached buildings are not aggregated with adjacent buildings, thus enabling the different house building styles – detached, semi-detached and terraced – to be clearly interpreted from the data.
- **Typification**: where features form a regular pattern but space does not allow them all to be shown, then a selection may be shown that depicts the nature of the pattern. An example in OS VectorMap Local is the depiction of back garden fences in dense urban landscapes where only sufficient are shown to indicate the nature and character of the gardens.

- **Symbolisation**: features that are shown in detail in OS MasterMap Topography Layer may be shown by standard symbolisation in OS VectorMap Local. For example, electricity pylons are depicted as oriented point symbols; road alignments are trimmed to minimum distance when roads pass under railways or other roads to indicate a bridge.
- **Displacement**: the movement of the representation of a feature away from its ground position in order to maintain its prominence. There is very little displacement in OS VectorMap Local, but in certain circumstances some water features, for example, streams, may be moved away from adjacent detail if their representation would otherwise be lost and some buildings are moved away from road edges to ensure they remain prominent.

Features represented in the product

A full list of feature codes and associated feature descriptions is given in chapter 1 in the technical specification. The following is a summary.

Buildings

Generally only buildings over 50 m² are represented, although in rural areas some smaller buildings may be enlarged to this minimum size if they are deemed to be significant in the landscape.

A building is represented both as a polygon, 'Building polygon' FC15014, and as an outline.

Standard building outlines are 'Building outline' FC15010 and important buildings 'Important Building outline' FC15011.

Important buildings constitute places of public interest and include such places as civic offices, places of worship, libraries, hospitals, post offices, railway stations, museums and so on.

Commercial greenhouses over 500 m² are shown as 'Glasshouse polygon' FC15016 with 'Building outline' FC15010.

Overhead building alignments such as roof lines are 'Overhead building line' FC15012.

Building divisions are only shown where they are necessary to distinguish an important building.

Roads

Roads are depicted in two ways in OS VectorMap Local:

- **Road alignments:** these approximate to the road centre lines and have a number of classifications each of which can be separately identified by feature code and feature description – see chapter 2 in the technical specification. Where there is a road name and/or a road number these are held as attributes of the road alignment. Where a road alignment passes under another road then the alignment is trimmed back 10 ground metres either side and 7 ground metres either side when it passes under a railway. These indicate bridges.
- **Road casings:** 'General road casing' FC15701 are the road extents that appear in the current 1:10 000 Scale Raster and OS Landplan® products. They have a minimum width of 14 ground metres.

They can be used together, for example to put a colour fill into the standard casings, or independently, for example, to show different classes of road with different widths or colours – see chapter 3 Cartographic style definitions in the technical specification section of this document.

Tunnels are represented by 'Tunnel alignments' FC15100. Tunnels cannot be identified from the road alignment features.

It should be noted that all detail that was under the general road casing depictions has been deleted. This will create 'white space' around narrower alignment representations.

NOTE: the road casings and the road alignments are sourced from data with different currencies. It is possible, in isolated instances, that there could be a discrepancy between them. As the offending tiles are identified they are corrected and the issue will be resolved as the national dataset goes into a normal revision cycle. We apologise for any inconvenience this may cause and encourage you, please, to notify us of any instances you find using the product and service performance report in annexe B.

NOTE: Welsh road names may be abbreviated to a single letter (as per English names) where it can be identified by knowledge or repetition provided at least one example is shown in full nearby, (for example Hoel/Hewl – H). If a road is named in both languages but there is insufficient room to show both only the Welsh version is shown.

Lakes, ponds, rivers and streams

Lakes and ponds greater than 100 m^2 are shown as 'Inland water polygon' FC15609 with the outline as 'Water feature' FC 15600.

Rivers and streams narrower than 5 m are shown as a single line 'Water feature' FC15600. The sides of rivers and streams wider than this are also shown as polygon fill as 'Inland water polygon' FC15609 with the edges as 'Water feature' FC15600.

Water features are broken under bridges or other detail.

Mean high and low water

Mean high water/mean high water springs (Scotland) is shown as 'Mean high water' FC15604 and Mean low water/Mean low water springs (Scotland) is shown as 'Mean low water' FC15605. Where the limit of coastal rock ornament defines the low water mark, mean low water is omitted.

The tidal limits are shown for their full extents, including from the mouths of river to the normal tidal limit (NTL). There is no specific feature defining NTL, although there is usually a textual description.

Areas of sea are depicted as 'Sea polygon' FC15608 to enable a colour fill to be applied.

Administrative boundaries

The approximate alignments of the following administrative boundaries are contained within the product:

- Add 'District or LB boundary' FC15201
- Add 'County, Region or Island boundary' FC15202
- Add 'Parliamentary boundary' FC15203
- Add 'Parish or Community boundary' FC15200

Railways

All railways are depicted as single alignments approximating to centre-lines. These are broken where they pass under bridges, buildings or other obstructing detail.

Urban extents

The 'Urban extent' FC15030 polygons are an approximation of the extents of urban development. There is no accepted standard definition of 'urban'. Ordnance Survey has carried out its own interpretation and therefore these extents should be treated as indicative only. They are not necessarily aligned to ground features. As with all polygons, where they cross tile boundaries they are closed along the tile edges.

Their purpose in the data is twofold:

- To provide an alternative means of depicting built-up areas at smaller scales.
- To provide a mechanism for differentiating general line-work in urban areas from that in rural areas in some cases there is a requirement to reduce the clutter of urban fences but retain the rural fences that are fundamental to defining the landscape. See 'General line detail' below.

General line detail

General line detail includes a number of real features, including fences, hedges, walls and other minor detail. Tracks and paths are classified together with other features as general pecked detail.

Where general line detail is either totally within or intersects an urban extent polygon, it is classed as either 'Urban general line detail' FC15031 or 'Urban general pecked detail' FC15033. Where it is totally outside the urban extent, it is classified as either 'Rural general line detail' FC15032 or 'Rural general pecked detail' FC15044.

Vegetation

Vegetation extents are defined as polygons. See chapter 2 in the technical specification for a full classification. They do not have explicit bounding features. Suitable vegetation symbols and fill patterns are defined in the style guides – see chapter 5. Where possible, vegetation classifications conform to the National Land Use Database (NLUD) version 4 classification.

Names and cartographic text

There are a number of feature codes that hold names as cartographic text. They are:

- ‘Boundary text’ FC15210. These features contain:
  - Parish or community names where the centre of the area falls on the tile.
  - Boundary descriptions, for example, ‘Boro const’.
  - Descriptions of boundary-related features such as boundary stones or boundary posts.
- ‘Antiquity building name’ FC15121. This includes both distinctive and descriptive building names.
- ‘Antiquity miscellaneous name’ FC15122. This includes both distinctive and descriptive non-building names.
- ‘Water name’ FC15603 – distinctive or descriptive names of water features, for example, ‘River Avon’ or ‘Drain’.
- ‘Index contour label’ FC15403 – height value of an adjacent contour line.
- ‘Standard contour label’ FC15409 – height value of an adjacent contour line.
- ‘Spot height label’ FC15404 – height value of an adjacent Spot height symbol.
- ‘Air height label’ FC15407 – height value of an adjacent Air height symbol.
- ‘Building name’ FC15017 – distinctive or descriptive names of buildings, for example, ‘Home Farm’ or ‘pumping station’.
- ‘General road name’ FC15701 – these are cartographically-positioned road names as appear on the 1:10 000 Scale Raster products. They have a text height of 1.0 mm (4 pt). This feature class also includes roundabout names and road junctions that have a text height of 1.3 mm (5 pt).
- ‘Important building name’ FC15017 – distinctive or descriptive names of important buildings, for example, ‘Elmhurst School’ or ‘school’. Every important building will have a textual description.
- ‘Miscellaneous name’ FC15112 – distinctive or descriptive names. The more important names, for example, settlement names such as ‘Rotherham’, will have a larger text height than descriptive names, for example, ‘dismantled railway’.
- Scottish and Welsh place/area names.
- Where a name has an alternative form in a different language and it is impossible to establish which of the two names is more useful and acceptable, then both names are shown. Where there is insufficient room to show both names only one will be shown:
  - In Wales – the Welsh version.
  - In Scotland – the anglicised version.

Ornamental features

Landform features such as slope symbols, flat rock, scree, cliffs and so on are represented by ‘Custom landform line’ FC15551 and ‘Custom landform polygon’ FC15550. When a suitable style is applied these give a very good traditional artistic representation of landform ornament.

Height

Height is represented by:

- **Contours**: ‘Standard contour line’ FC15400 and ‘Index contour line’ FC15400. These define the geometric shape of the contour only. The heights are indicated in text form as ‘Index contour label’ FC15403 and ‘Standard contour label’ FC15409. Contour lines do not have a height attribute. Contours are normally at 5 m vertical intervals with index contours at 25 m vertical intervals; in areas of high relief the contour interval is 10 m with index contours at 50 m vertical intervals. Contours are accurate to about a quarter of a contour interval.
- **Spot heights**: the geographic position of ground-surveyed spot heights are represented by ‘Spot height position’ FC15405 with the height indicated in text form only as ‘Spot height label’ FC15404 text features; and height derived from aerial photography as ‘Air height position’ FC15406 and ‘Air height label’ FC15407. Spot height symbols do not have a height attribute.

Archaeological and antiquity information

Antiquity information is derived primarily from the source basic-scales data and every effort is made to represent antiquity detail as faithfully as possible. Many antiquity sites, for example, tumuli, mottes, cairns and so on are represented by standard symbology such as slope symbols. Sites that have no standard representation are represented by 'Antiquity site' FC15120 point feature. Descriptive antiquity text is represented by 'Antiquity miscellaneous name' FC15122, with building names as 'Antiquity building name' FC15121.

GML supply format

OS VectorMap Local is supplied in GML v2.1.2.

Clients and servers with interfaces that implement the Open Geospatial Consortium® Web Feature Service Interface Standard (http://www.opengeospatial.org/standards/wfs) read and write GML data. GML is also an ISO standard (ISO 19136:2007). See also the GML pages on OGC® Network: http://www.ogcnetwork.net/gml.

OS VectorMap Local vector data structure

OS VectorMap Local is supplied as vector data. It contains no explicit topology other than some of the features being polygons.

Geographic features are represented as data entities, either as points, lines, polygons or text.

- Points are fixed positionally by one coordinate pair, for example, a pylon.
- Lines are fixed positionally by a series of connected coordinate points to represent linear map features such as roads, railways and so on. Points and lines within the data model determine the geometric (positional) characteristics of the data.
- Polygons are continuous areas defined by sets of bounding closed lines. These may be used to style particular fill colours or patterns, such as water or areas of vegetation.
- Text features are fixed positionally by one coordinate pair. The position that this point represents is the anchor point of the text – see Attribution, below. The text feature also has attributes defining the orientation, text height and suggested text font of the item of text.

Edgematching

Tiles are complete in themselves, that is, all text falls within the tile body and all polygons that cross tile borders are closed along the tile edges.

Where a feature ends by intersecting a tile edge, it is matched with its corresponding feature on the adjacent tile, so that both features have the same unique coordinates and the same feature code. The representation of detail across the tile edge will be of a cartographically-acceptable standard when viewed or plotted at a scale of approximately 1:5 000 or smaller.

There are no features or text outside the tile edges.

Attribution

The level of feature attribution on OS VectorMap Local is limited to that required to enable selection and styling.

Every feature has:

- a feature identifier, for example, `ID_38404` – see note below;
- a feature code, for example, `15031`;
- a feature description, for example, `Urban general line detail`; and
- geometry.

NOTE: the feature identifier is a sequential number that simply identifies a GML record. Each GML data file starts with ID_1 and continues in sequence for however many features the file may contain*. The feature identifiers are not linked to real-world features and are not maintained between updates, and should therefore* ***not*** *be used as linking references to other data.*

Line features that are road alignments (RoadCLineMember) may have the additional attributes:

- road name, for example, `KILN LANE`; and
- road number, for example, `A30`.

Most point features do not have any additional attribution. However, three do: they are 'Standard flow arrow' FC15610, 'Large flow arrow' FC15611 and 'Pylon' FC15104. These have an 'orientation' attribute to enable a symbol to be correctly aligned to the associated line feature.

Text features as well as having a text string; for example, Manchester would have the following text rendering attributes:

- anchor position, for example, 4 – see figure 1;
- font, for example, 1 – see table 1;
- height of text (in ground metres), for example, 20; and
- orientation (in tenths of a degree), for example, 2880.

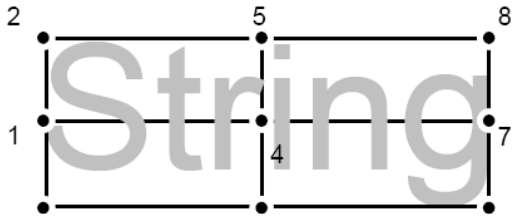


Figure 1: Anchor position attribute values

Table 1: Font attributes values

Value	Suggested font	Text features
0	English Gothic	Antiquity descriptions
1	Univers® Medium	Default
2	Univers Light	Boundary information
3	(suppressed)	Not used
4	Arial® Narrow	Detailed road names

Depiction of complex polygons

OS VectorMap coordinates in outer boundaries are oriented in an anticlockwise direction and inner polygons in a clockwise direction

Coordinate referencing system

The GML specification provides for the use of a variety of coordinate reference systems. At present only the British National Grid (BNG) is used in OS VectorMap Local.

British National Grid (BNG)

The BNG spatial reference system uses the OSGB36® geodetic datum and a single Transverse Mercator projection for the whole of Great Britain. Positions on this projection are described using easting and northing coordinates in units of metres.

Height datum

The BNG is a horizontal spatial reference system only; it does not include a vertical (height) reference system. In OS VectorMap Local data heights are given by text features that are separate from the geometric feature, such as ‘Spot height label’ FC15404 feature, which will be positioned close to a ‘Spot height position’ FC15405 feature. The geometric attributes therefore contain horizontal geometry only. Several orthometric height datums are used by Ordnance Survey to define vertical spatial reference systems. The most common of these is Ordnance Datum Newlyn (ODN), which is used throughout mainland Britain. The height information in OS VectorMap Local features does not specify which vertical reference system is used.

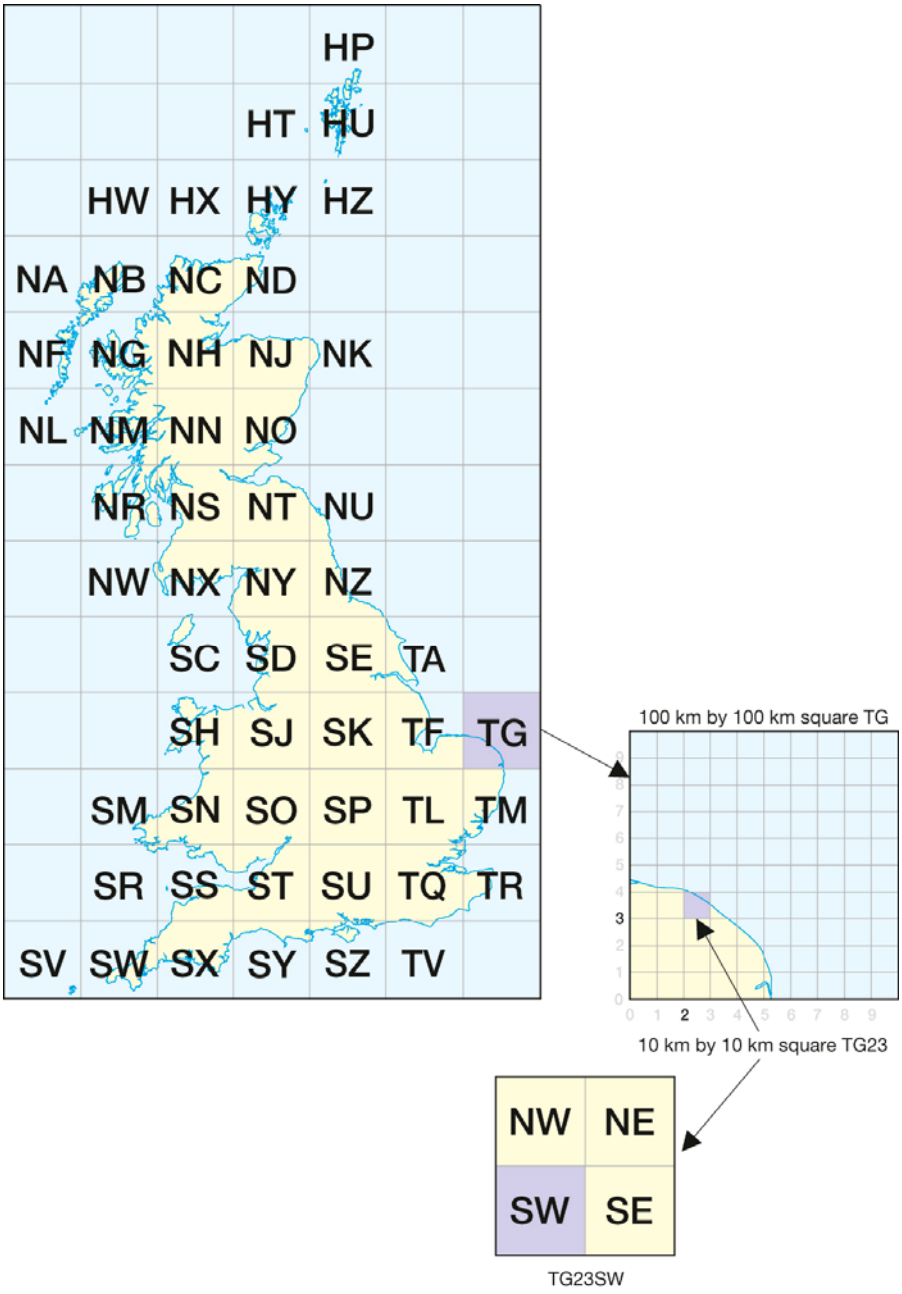
Chapter 3 The National Grid

OS VectorMap Local tiles are identified by quoting the National Grid reference of the south-west corner of the area they cover. Ordnance Survey divides Great Britain into squares 100 km by 100 km. Each of these squares has a unique two-letter reference, for example, TG in the diagram below.

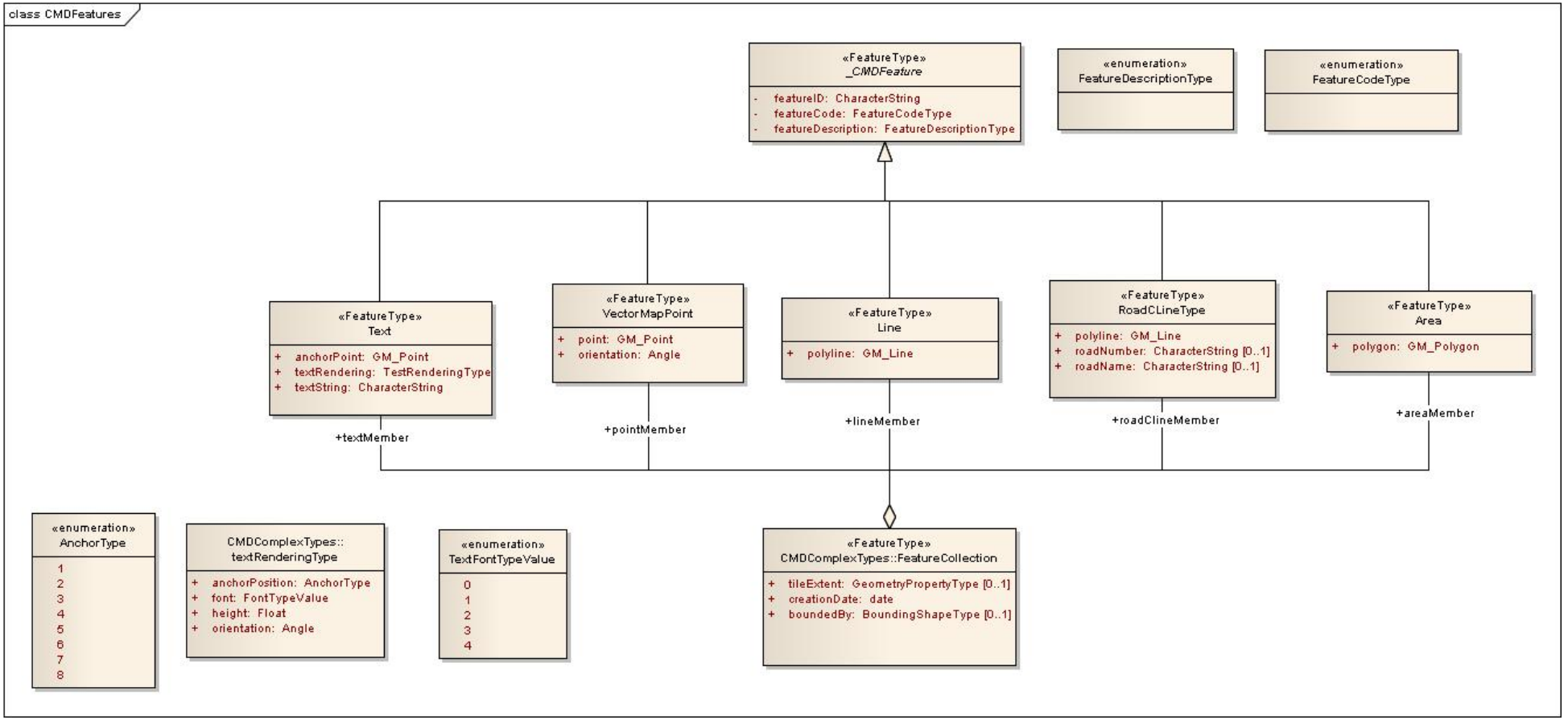
To describe an OS VectorMap Local tile, first add a two digit reference to the 100 km by 100 km square reference, with the easting first followed by the northing, for example, TG23. Then identify which quadrant of that grid square is required and add SW, SE, NW or NE to the reference, for example, TG23SW.

For additional information on how to use the National Grid, visit the Ordnance Survey's website at:

http://www.ordnancesurvey.co.uk



Chapter 4 Data model



Chapter 5 OS VectorMap Local style definition

It is the flexibility to select and style the different feature classes in different ways that makes OS VectorMap Local such a versatile contextual mapping product. It can be styled in an almost infinite variety of ways to best provide a geographic context to the customer's overlay information.

To help assist in this styling and to provide working examples, there are six style sheets that are available for free downloading from the Ordnance Survey website to accompany this product.

Different geographical information systems (GIS) apply styling in different ways and there can be no one 'style template' mechanism that can be automatically applied to all systems. OS VectorMap Local style templates have followed the same method of defining graphical style as is used for OS MasterMap® Topography Layer. The style is defined as .xml and .xsl coding.

As well as defining the feature selections, plot order, colour, and line thicknesses and so on, the style sheets also contain all the symbol and polygon-fill definitions.

These files can be easily interpreted by system developers and have the advantage that they can be automatically read and applied by any of the many Scalable Vector Graphics (svg) software packages that are available.

Any of these styles can be tailored to meet specific user requirements.

Intended use

The intention is to supply a set of advisory cartographic styles with the OS VectorMap Local product to assist the user in displaying the data. The stylesheets have been written in XML format to ensure simplicity and, as a result, it is encouraged that they be used to improve the display of the data in as many customer-use scenarios as possible. Although few users will be able to read XML into their software at present, the stylesheets can be opened in any text software, for example, *TextPad* or *Notepad*, and can be manually input into a GIS for example. However, with third-party software it is possible to generate SVG directly from our files. SVG is easily convertible into PDF or any raster format, also with common, and often freely-available, third-party software.

It should be stressed that they are only a guide and the customer is free to apply to the data product any style that he or she wishes.

The different stylesheets

The styles have been produced to allow as many customers to access the code behind them. More graphic-minded users may wish alter those provided or apply their own styles and even add special effects and so on.

Six different stylesheets are presented as follows:

- Black and White – a purely black or white display of the data (no greys).
- Streetview – a style based upon the appearance of the OS Street View® product.
- 1:10 000 Scale Raster– a style based upon the appearance of the OS Landplan colour product.
- Standard Style 1 (a detailed style with more features shown and intended for larger scales).
- Standard Style 2 (style to suit many uses and offers the most complete map appearance).
- Standard Style 3 (a simple style with fewer features shown and intended for slightly smaller scales).

Whereas 1:10 000 Scale Raster and Streetview are heavily based on the cartographic styles of existing products, Style 1, Style 2 and Style 3 are a matching style set designed to show the same data at three scale ranges within the local scale of the data with the aim of continuity as one 'zooms' in or out of the map.

Communicating style in SVG

Effective communication of data is hugely important and a set of cartographic stylesheets is offered as a foundation to help customers achieve this.

The difficulty with styling for the geographic information (GI) industry is that graphic capabilities and requirements vary so much between application type and software used. OS VectorMap Local solves this issue by providing simple yet effective data styling that facilitates quick viewing (for those who 'just want to see the data') whilst making significant visual impact in more graphic-rich applications.

The cartographic stylesheets take an Extensible Markup Language (XML) format, although their properties are also contained within this document.

A visual representation of each of the styles is available in compressed scalable vector graphic (SVGZ) format and portable document format (PDF).

Units and scale

- All values given within both this document and the XML stylesheets are in ground metres (m). However, please note that the display of features relative to one another in SVG may change depending on scale; this is especially true of the 'dot fills' in the 'Black and White' style as they have the habit of blocking in at smaller scales and may also produce undesired moiré effects. As the source data is 1:10 000 scale, the stylesheets have been designed to work best at scales close to this with the exceptions of the Style 1, which works best at around 1:5 000 scale, and the Style 3, which works best at around 1:15 000 to 1:20 000 scale.

Colours

Colours are defined as hexadecimal values taking the form of hex triplets. These are six-digit hexadecimal numbers comprising 3 bytes. Byte 1 is the red value, byte 2 is the green value and byte 3 is the blue value. They are preceded by a hash symbol.

It is thought that this RGB format will lend itself to more applications than other formats such as CMYK. It is a common standard in computing.

Colours have been chosen based upon on-screen display. For print these colours may appear too washed out and will need to be slightly bolder; this can be done in a GIS to suit the user's needs.

Turning features off and null values

To 'turn features off', that is, to not display them, then the style is assigned a value of 'none' or '0'. For some features we have assigned some values but not shown the feature. For example, ridge or rock lines have been given a line weight of 0 pt so as to not display but they have been given a pecked style and a colour as a recommendation. Therefore a user could assign a line weight and a style would instantly be applied.

Colour values are given as 'none' to not be shown. Line weights and font sizes are given a value of '0.00 pt'.

How the styles work with the data

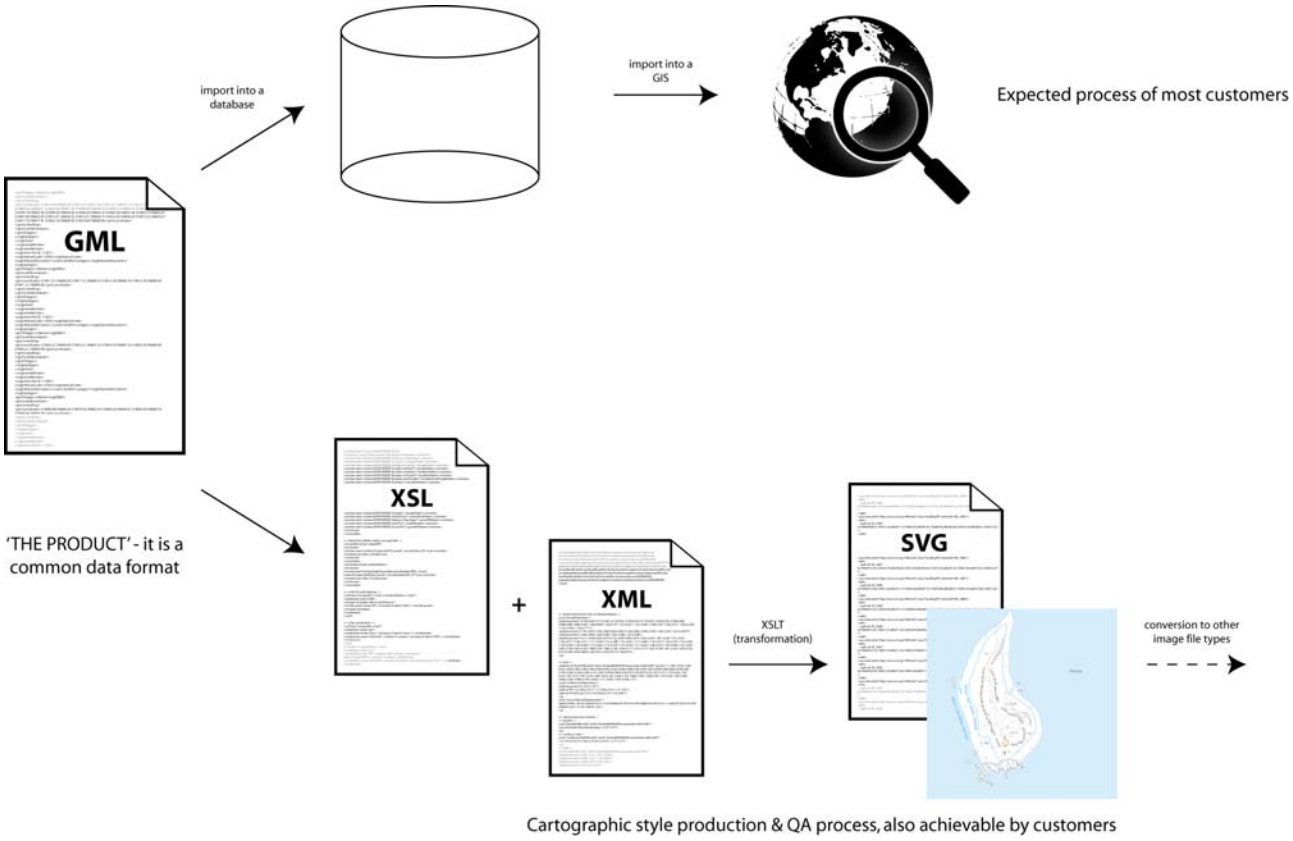


Figure 1: Possible post-processes for OS VectorMap Local data

OS VectorMap Local data, 'the product', is in GML format. The cartographic stylesheets are in XML format and their associated XSL files (the data stylesheets) are the link between the two.

The XML stylesheets contain the cartographic style description of each of the map features. For a linear feature, such as a single-track railway, the XML file will specify a colour and a line weight, that is it holds the values to be used for the visual representation of each feature.

```
.singleTrackRailway{stroke:#A5A5A5;stroke-width:2.65;fill:none}
```

The XSL file holds the instructions that link the two. If a single-track railway is found in the data (GML file) then the XSL file tells the user, or their software, how to draw it by looking it up in the style dictionary that is the XML file.

```
<xsl:when test="contains($FEATUREDES,'Single track railway or
siding;')">singleTrackRailway
</xsl:when>
```

It is thought that the majority of customers will be viewing the GML either directly in a GML viewer or in a GIS package (usually via a database). In such a scenario, the XSL and XML stylesheets will act as a style guide from which the user can manually look up suggested cartographic style values.

There is also the opportunity of using the product with the stylesheets to produce SVG files. These can then be easily converted into any image format the user requires.

Draw order and logic

During testing, an XSL file was created to establish a cartographic draw order for the data and this order is set out below in order 1 (the first thing to be drawn, that is at the bottom of the map) to 6 (the last thing to be drawn, that is at the top of the map).

The order has been designed to produce the best overall map for all of the stylesheets. However, if the map user is studying water lines, for example, then the line groups B and D would be better at the top of the map.

1 Draw urban polygon detail

Urban areas are drawn first so that they do not hide any other detail such as building polygons, which may be coincidental.

2 Draw base polygon detail

Both base and top polygons are a rare area of the XSL file where order within a particular ‘paragraph’ of code matters. ‘Broad-leafed woodland’, for instance, must be placed after ‘Broad-leafed woodland and Shrub’. If it were not, then whenever broad-leafed woodland and shrub occurred in the data ‘Broad-leafed woodland’ would be found as a match in the code before ‘Broad-leafed woodland and Shrub’ had even been reached. The result of this is that areas of broad-leafed woodland and shrub would simply be depicted as broad-leafed woodland that is the shrub symbol would be lost.

1 **Polygons fills** – areas of solid fill such as woodland or sand.

2 **Pattern fills** – patterns such as vegetation, for example, if a woodland fill was placed then tree symbols are now placed over the top of it.

3 Draw top polygon detail

1 **Polygons fills** – areas of solid fill such as woodland or sand.

2 **Pattern fills** – patterns such as vegetation, for example, if a woodland fill was placed then tree symbols are now placed over the top of it.

4 Place additional black and white detail

Black and white fill patterns – unique to the black and white stylesheet, this draw layer is required to depict buildings, woodland and mud, which on the other styles would be represented by polygon fills on the base polygon layer. This additional draw layer exists to depict these fills as a pattern of dots, which can be placed over vegetation symbols (theoretically vegetation should go above the dot fill but as they are both black it makes no difference).

5 Render line features

Line features are now drawn such that when they overlap or cross, group will decide precedence. For example, ‘Group A’ features will always sit beneath lines from other groups, whereas ‘Group I’ features will always be placed on the top of all other line features.

1 **Group A** – vegetation or landform limits, rural and urban general pecked detail.

2 **Group B** – water features and mean low water.

3 **Group C** – tops of slopes and cliffs, ridge or rock lines and custom landform lines.

4 **Group D** – mean high water.

5 **Group E** – rural general line detail and urban general line detail.

6 **Group F** – building and glasshouse outlines and white road centrelines.

7 **Group G** – B road centrelines.

8 **Group H** – A road centrelines.

9 **Group I** – motorway centrelines.

10 **Group J** – boundaries and general road casing.

11 **Group K** – telephone and electric transmission lines, important building outlines, railways, tunnel alignments and overhead detail.

12 **Group L** – contours.

13 **Group M** – boundary text placements (set to not be shown in our stylesheets).

6 Draw point features as symbols

Point symbols, as per convention, are added over the other detail. This includes pylons, antiquities, heights, triangulation stations, flow arrows, water features and other point features.

7 Place text

Finally, text is drawn. There are several text features displayed and some have been set to not show in the stylesheets. The reason for this being that the data offers the user different ways of displaying the same information for road names and road numbers as will be explained on the next page.

Text styles

All styles were built by converting XML to SVG for simplicity and maximum compatibility; however, the user may wish to enhance the text.

Most of the text could benefit from the addition of a white halo or hold-out. This effect has been achieved on road numbers in the stylesheets but only by a ‘stroke and fill’ method, which is far from ideal as it degrades the text. Many GIS and illustration software packages will allow the user to add hold-outs and/or halos and even set rules for them.

Road text

The following features contain road names:

- Alleyway, road name
- Local Street, road name
- Minor Road, road name
- Pedestrianised Street, road name
- Private Road, restricted access, road name
- Private Road, public access, road name
- B Road, road name
- B Road, primary, road name
- A Road, trunk, road name
- A Road, road name
- A Road, primary and trunk, road name
- A Road, road name

One could display each of these names, which the data has placed on road centrelines and even style them to complement the road colour. However, in most of the suggested stylesheets, ‘General road name’ has been used instead as cartographic placement is better and a single style was deemed sufficient.

The above list is another option of showing the same information: for example, if one displayed both general road names and A road names then duplicates would appear on the A roads and in some cases they would coincide or overlap. The Streetview style makes use of the A road and B road names from road centrelines rather than using the general road name features.

Cartographic output

Roads

The structure of the data is not overly complicated but it presents a choice when styling road joins and caps. Where road features meet are not always joins; some are caps. If road fills are built by applying a thick stroke to road centrelines as in our stylesheets then there is a problem that white gaps will appear where two capped road line features meet. This can be reduced by setting round caps but in doing so all road ends (the true caps) protrude over the road casing.

Our stylesheets have adopted a system of round joins and butt caps (illustrated by example (b) in the middle of the figure 2). This leaves some gaps in road fill but less than butt joins and with the added positive of fitting well to the road casing at road ends, that is cul-de-sacs.

The options (and their associated difficulties) are highlighted in the figure below:

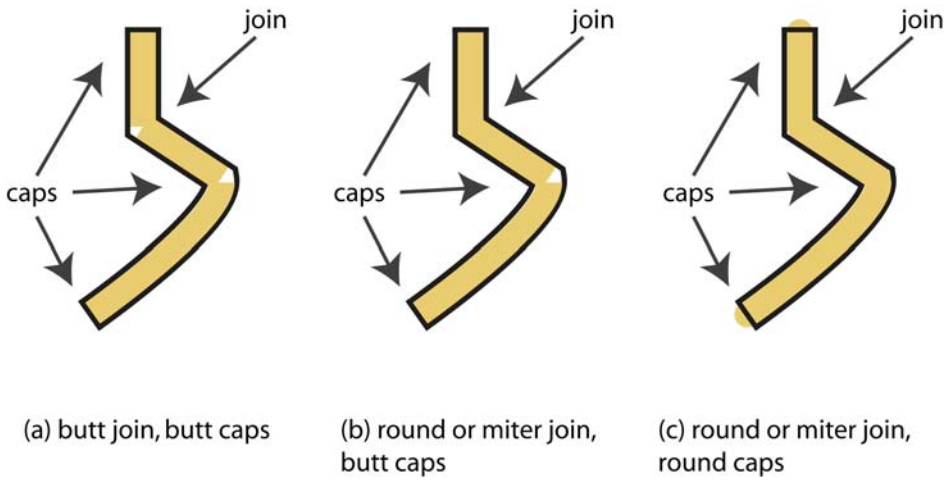
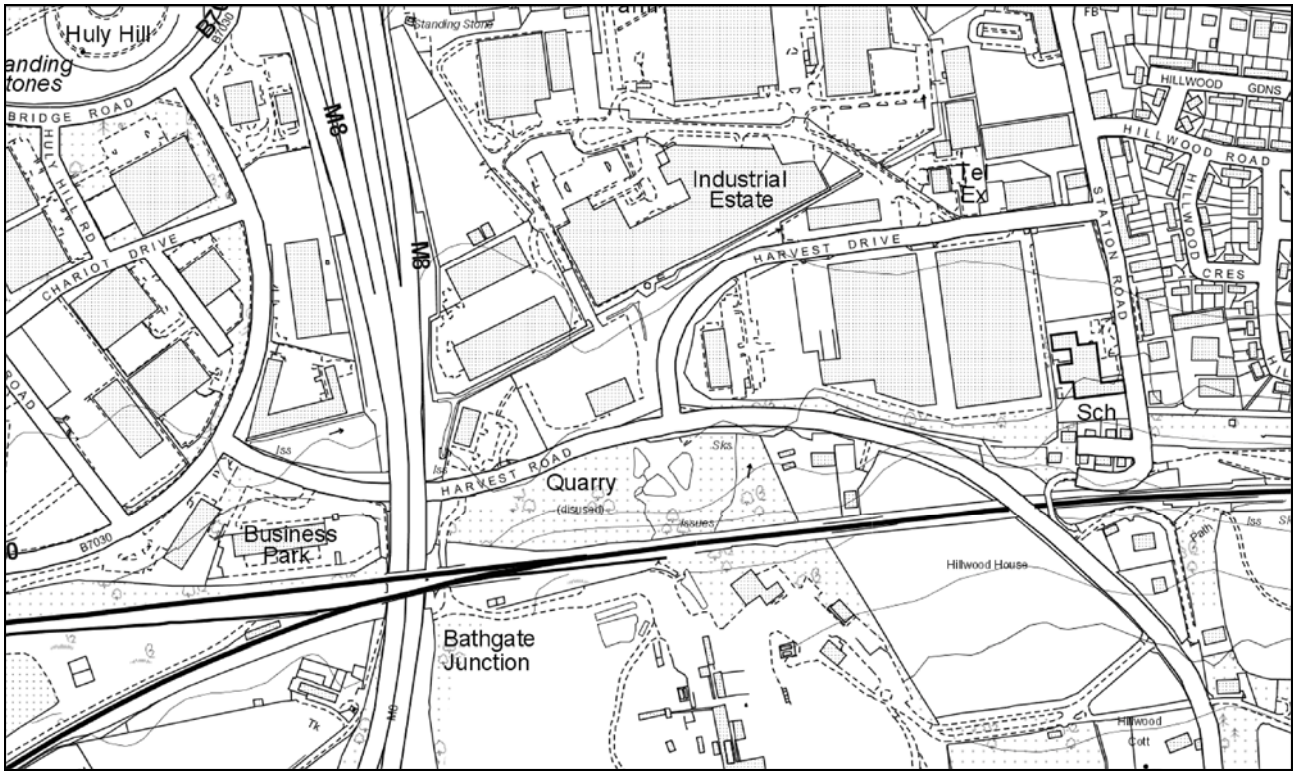


Figure 2: Depicting road joins and caps

Black and White Style

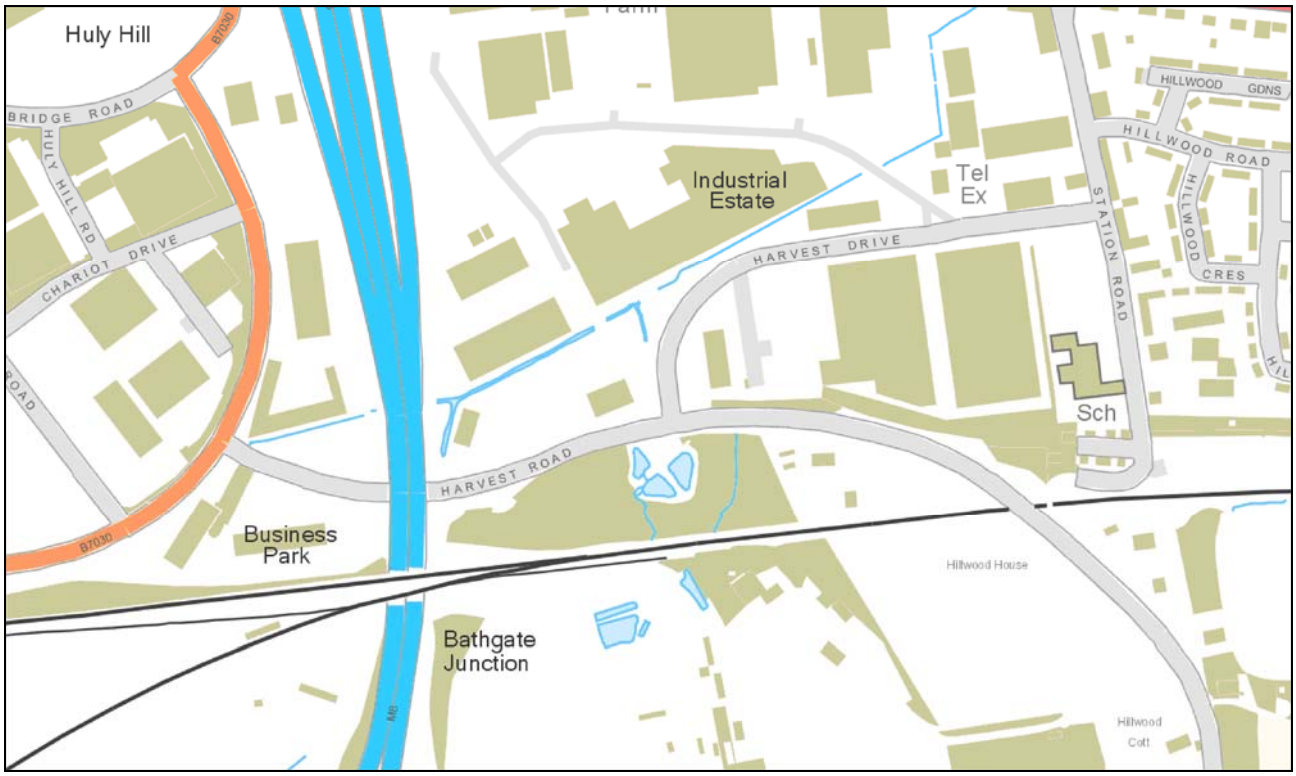
This defines OS VectorMap Local output with a similar depiction to 1:10 000 Scale Black and White Raster.



See OS VectorMap Local web page to link to stylesheets.

Streetview Style

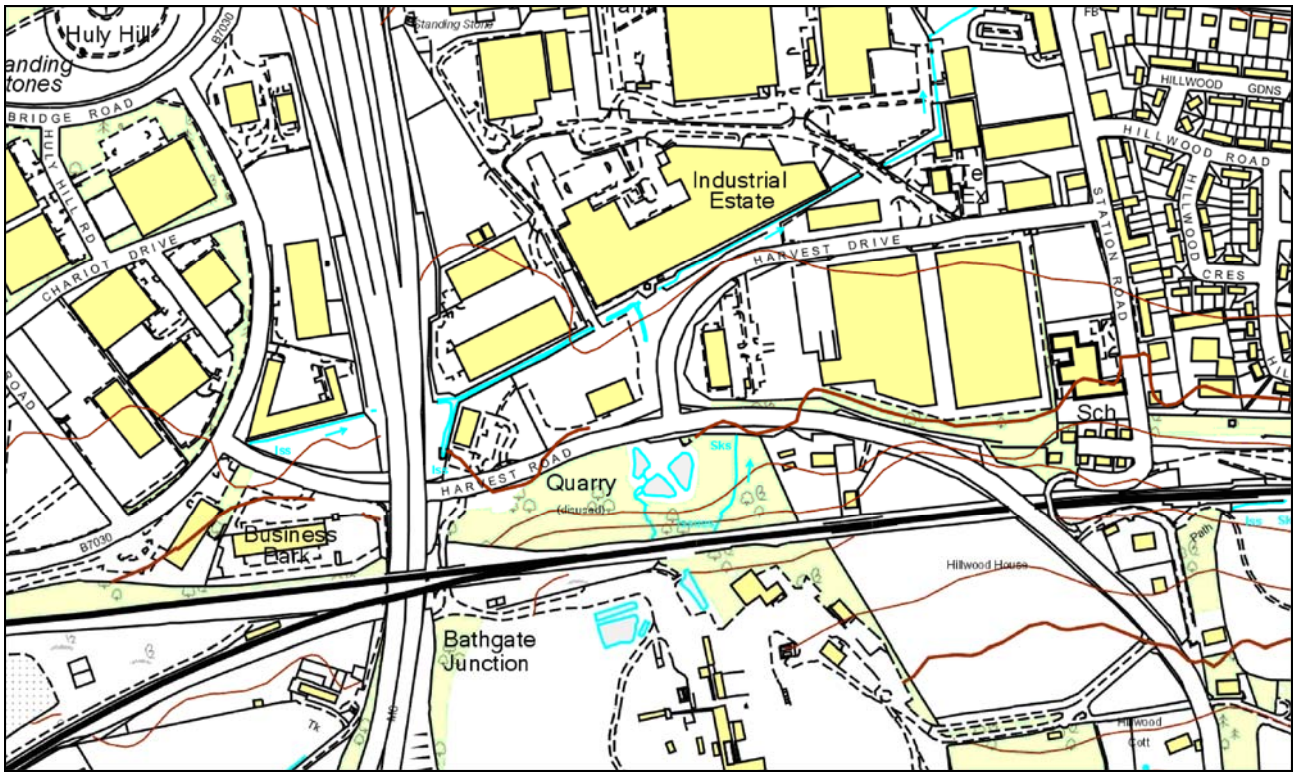
This defines OS VectorMap Local output with a similar depiction to OS Street View.



See OS VectorMap Local web page to link to stylesheets.

1:10 000 Scale Raster Style

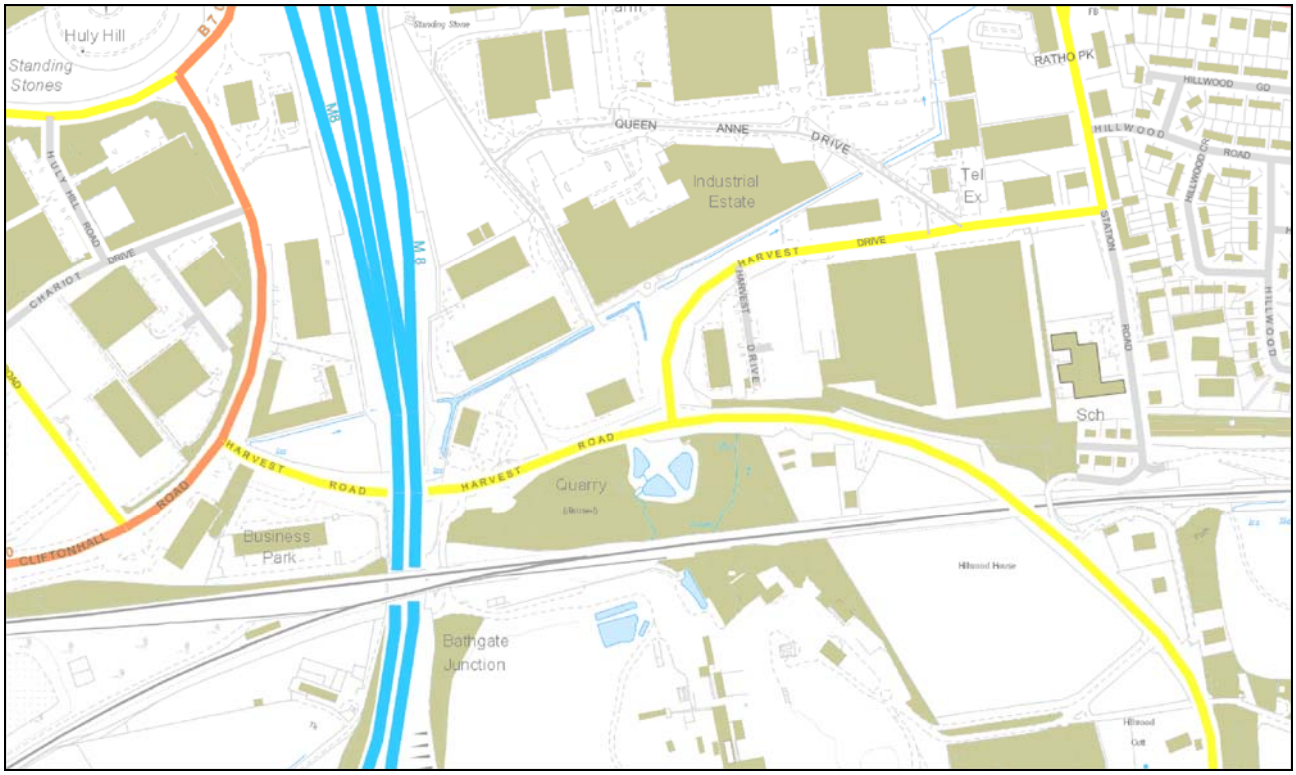
This defines OS VectorMap Local output with a similar depiction to OS Landplan (with the option including or omitting contours) or 1:10 000 Scale Raster.



See OS VectorMap Local web page to link to stylesheets.

Standard Style 1

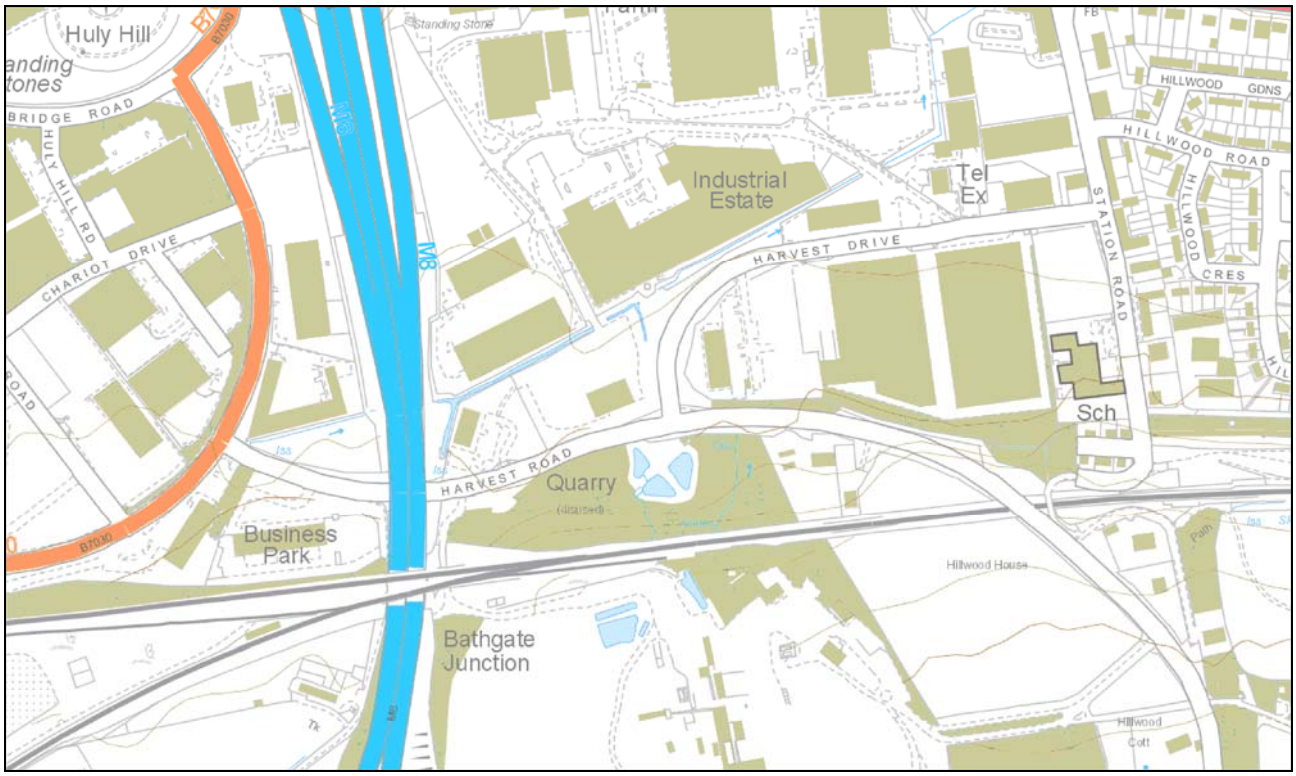
The style shown displays road alignments by variable width lines with a much more comprehensive coverage of road names. This is designed for display from approximately 1:3 000 to 1:8 000 scale.



See OS VectorMap Local web page to link to stylesheets.

Standard Style 2

This defines OS VectorMap Local in a more subdued colour scheme than is traditional and is intended to provide a suitable context map for data to be shown, from approximately 1:5 000 to 1:15 000 scale. Road casings are shown to a minimum width with selected road names and numbers cartographically positioned – as depicted on 1:10 000 Scale Raster. Contours and contour labels are also included. DfT classified roads have colour fill.



See OS VectorMap Local web page to link to stylesheets.

Standard Style 3

Again, this has a similar look and feel to Standard Style 1 but is less cluttered. Urban extents define the built-up areas with only important building being shown within them. All general line features have also been deselected from urban areas (this includes back-garden fences). The smaller roads and their names have been deselected. This style is designed for display from approximately 1:8 000 to 1:20 000 scale.

See OS VectorMap Local web page to link to stylesheets.

Annexe A Road abbreviations

This annexe gives the approved, shortened and special abbreviations for use with road names (both urban and rural).

It contains a list of items that are most likely to occur as the descriptive element within road names.

Combinations can be used, for example, SHIRLEY RD S (SHIRLEY ROAD SOUTH) OR N RD ROWNHAMS (NORTH ROAD ROWNHAMS).

Three priorities of shortened abbreviations are shown; however, every effort is made to incorporate the full name if possible.

Item	Shortened abbreviations (in priority of use)	
	1	2
ALLEY	AL	
APPROACH	APP	AP
ARCADE	ARC	AR
AVENUE	AVE	AV
BOULEVARD	BVD	BD
BROADWAY	BDY	BY
BROW	BR	
BUILDINGS	BLDGS	BG
BY-PASS	BY-PS	B-P
CAUSEWAY	CSWY	CW
CENTRE	CTR	
CHASE	CHA	CH
CIRCLE	CIRC	CI
CIRCUS	CIR	CI
CLOSE	CL	
CORNER	CNR	
COURT	CT	
CRESCENT	CRES	CR
CROFT	CFT	CF
CROSS	CS	
CUT	CU	
DALE	DL	
DRIVE	DR	
DROVE	DRO	DV
EAST	E	
EMBANKMENT	EMB	EM
ESPLANADE	ESP	ES
ESTATE	EST	
FIELD	FLD	FD
FLY-OVER	FLY	F-O
FOLLY	FO	
GAP	GP	
GARDENS	GDNS	GD
GATE	GT	
GREEN	GN	
GROVE	GR	
HEIGHTS	HTS	HT
HILL	HL	
HOLLOW	HOL	HW
JUNCTION	JUNC	JN
LANE	LA	
LAWN	LWN	LN

Item	Shortened abbreviations (in priority of use)	
	1	2
LEA	LE	
LOWER	LR	
MEAD	ME	
MEADOW	MDW	MW
MEWS	MS	
MOUND	MD	
MOUNT	MT	
NORTH	N	
ORCHARD	ORCH	OR
PARADE	PAR	PD
PARK	PK	
PASS	PS	
PASSAGE	PAS	PG
PATH	PA	
PLACE	PL	
PRECINCT	PREC	PT
PROMENADE	PROM	PR
QUAY	QY	
RIDE	RI	
RIDGE	RDG	RG
RISE	RS	
ROAD	RD	
ROUNDABOUT	RBT	
ROW	RW	
SAINT	ST.	
SIDE	SD	
SPUR	SP	
SOUTH	S	
SQUARE	SQ	
STAIRS	STRS	SR
STEPS	STPS	SP
STRAND	STR	SD
STREET	ST	S
TERRACE	TERR	TE
TRACK	TK	
VALE	VA	
VIEW	VW	
VILLAS	VIL	VI
WAY	WY	
WEST	W	
WHARF	WHF	WF
YARD	YD	

Annexe B Product and service performance report form

Ordnance Survey welcomes feedback from its customers about OS VectorMap Local.

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: .....

Organisation: .....

Address: .....

.....

.....

Postcode: .....

Phone: .....

Fax: .....

Email: .....

Quotation or order reference: .....

Please record your comments or feedback in the space below. We will acknowledge receipt of your form within three (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:

OS VectorMap Local Product Manager, Ordnance Survey, Adanac Drive, SOUTHAMPTON, SO16 0AS.

If you wish to return it by fax, please dial 023 8005 6159.

Any personal information that you supply with this report form will be used by Ordnance Survey only in the improvement of its products and services. It will not be made available to third parties.

OS VectorMap Local

Technical specification

Contents

v1.2 – 02/2011

Introduction

Purpose of this specification and disclaimer

This is the technical specification (hereafter referred to as the specification) applicable to the OS VectorMap Local (hereafter referred to as the product), which is referred to in the Framework Direct Licence, Specific Use Framework Partner Licence or your other customer contract for the product.

We may change the information in this specification at any time, giving you the notice period specified in the customer contract made between you and Ordnance Survey.

We do not accept responsibility for the content of any third-party websites referenced or accessed in or through this specification, any other contractual documentation and/or the Ordnance Survey website.

Copyright in this specification

Chapter 1 OS VectorMap Local in GML

This chapter describes the GML format for OS VectorMap Local. It is recommended that you read this in conjunction with the Open Geospatial Consortium (OGC) document, *Geography Markup Language v2.1.2.*

The XML specifications that GML is based on are available from the World Wide Web Consortium (W3C®) website: http://www.w3.org.

Information about Unicode and UTF-8, the character encoding we have chosen, is available on the Unicode Consortium website: http://www.unicode.org/.

Annexe A in the technical specification is a glossary with links to and from the relevant parts of the user guide.

Use of examples

Any examples in this chapter that mention specific data content are to be taken as examples only.

Clarification of terms used in this chapter

Feature attribute

Attribute as defined in **feature.xsd**.

XML attribute

Attribute as used in an XML context is referred to as an XML attribute.

Property

Most feature attributes are encoded as GML properties – property means a GML property.

Schema overview and location

XML schemas are used to define and validate the format and content of the GML. The GML v2.1.2 specification provides a set of schemas that define the GML feature constructs and geometric types. These are designed to be used as a basis for building application-specific schemas, which define the data content.

The Ordnance Survey application schemas, which are referenced by the data, are available from our website at http://www.ordnancesurvey.co.uk/oswebsite/xml/cmdschema/local/V1.

All versions of the schema are maintained in sub-folders under this folder, for example, the first version is in … /V1.

These schemas make use of XSDs (XML schema definitions) and DTDs (document type definitions) produced by the W3C, which are available from the W3C website at http://www.w3.org/XML/1998/namespace.html.

Schema descriptions

The W3C-provided XSDs and DTDs are:

xml.xsd – to allow the use of the xml:lang attribute for language qualification.

XMLSchema.dtd – required by xml.xsd.

datatypes.dtd – required by XMLSchema.dtd.

The OGC-provided schemas are:

feature.xsd – the feature and property constructs.

geometry.xsd – the geometric constructs such as polygon and point.

xlinks.xsd – a schema based on the W3C XLINK recommendation provided by the OGC to make use of the XLINK constructs.

The Ordnance Survey-provided schemas are:

OSGeometryTopology.xsd – geometry and topology constructs.

CMDFeatures.xsd – the feature type declarations.

CMDComplexTypes.xsd – the header constructs and other complex type declarations.

CMDSimpleType.xsd – valid attribute values.

Format description

XML declaration

The XML declaration to all query results is:

```
<?xml version=‘1.0’ encoding=‘UTF-8’?>
```

Documentation

All information returned from a query is provided in an osgb:FeatureCollection. If no features lie inside a query then an empty collection is returned with its required collection properties.

The document defines the XML namespaces:

osgb	`http://namespaces.ordnancesurvey.co.uk/cmd/local/v1`
gml	http://www.opengis.net/gml
xsi	http://www.w3.org/2001/XMLSchema
xlink	http://www.w3.org/1999/xlink

The location of the schema is defined as:

http://www.ordnancesurvey.co.uk/oswebsite/xml/cmdschema/local/V1

The fid is set to the Ordnance Survey identifier given to the query.

For example:

```
<?xml version='1.0' encoding='UTF-8'?>
<osgb:FeatureCollection
xmlns:osgb='http://namespaces.ordnancesurvey.co.uk/cmd/local/v1'
xmlns:gml='http://www.opengis.net/gml'
xmlns:xsi='http://www.w3.org/2001/XMLSchema-instance'
xsi:schemaLocation='http://namespaces.ordnancesurvey.co.uk/cmd/local/v1
http://www.ordnancesurvey.co.uk/oswebsite/xml/cmdschema/local/V1/CMDFeatures.xsd
' fid='ss44ne'>
<gml:description>Ordnance Survey, (c) Crown Copyright. All rights reserved,
2009-05-05</gml:description>
<gml:boundedBy>
<gml:Box srsName='osgb:BNG'>
<gml:coordinates>245000.00,145000.00 250000.00,150000.00</gml:coordinates>
</gml:Box>
</gml:boundedBy>
<osgb:tileExtent>
<osgb:Rectangle srsName='osgb:BNG'>
<gml:coordinates>245000.00,145000.00 250000.00,150000.00</gml:coordinates>
</osgb:Rectangle>
</osgb:tileExtent>
……..
 </osgb:FeatureCollection>
```

Geometry

A geometric property is one that describes a specific geometry. All geometric properties are encoded according to the GML specification. We have extended the GML v2.1.2 specification to include a rectangle that is defined by two points. The first point defines the minimum coordinate whilst the second point defines the maximum coordinate.

All geometric properties are encoded by placing the GML geometry elements inside an element that takes its name from the feature attribute.

The XML attribute srsName shall be set to osgb:BNG (BNG stands for British National Grid), which uses eastings and northings specified in metres.

If a line is broken or a polygon has bled into another because of a partial update then the XML attribute broken shall be set to true. All polygon boundaries have an anticlockwise orientation.

For example:

```
<osgb:lineMember>
<osgb:Line fid='ID_1295'>
<osgb:featureCode>15400</osgb:featureCode>
<osgb:featureDescription>Standard contour line</osgb:featureDescription>
<osgb:polyline>
<gml:LineString srsName='osgb:BNG'>
<gml:coordinates>246639.25,146495.09 246634.49,146530.74 246625.98,146556.19
246625.46,146562.20 246631.36,146576.26 246636.85,146582.10 246649.17,146590.87
246657.30,146606.28 246671.40,146614.89 246689.72,146631.57 246705.84,146650.08
246715.88,146656.25 246741.01,146664.35 246751.29,146677.19 246758.39,146683.38
246766.09,146687.50 246771.74,146694.56 246773.01,146700.42 246772.30,146708.62
246762.56,146710.36 246752.82,146708.35</gml:coordinates>
</gml:LineString>
</osgb:polyline>
</osgb:Line>

</osgb:lineMember
```

Chapter 2 Feature codes and feature descriptions

The table below gives descriptions for each feature code value and GML feature class. The GML can be used in conjunction with the six styles defined in this user guide. It is also possible to modify any of those styles to provide a further customised result in order to meet the users' requirements.

Feature code	Feature description	GML feature class	Notes
15010	Building outline	LineMember	
15011	Important building outline	LineMember	
15012	Overhead building line	LineMember	
15013	Glasshouse outline	LineMember	
15017	Building name	TextMember	
15014	Building polygon	AreaMember	
15015	Important building name	TextMember	
15016	Glasshouse polygon	AreaMember	
15030	Urban extent	AreaMember	
15031	Urban general line detail	LineMember	Totally within urban extents
15032	Rural general line detail	LineMember	Outside or crossing urban extents
15033	Urban general pecked detail	LineMember	Totally within urban extents
15044	Rural general pecked detail	LineMember	Outside or crossing urban extents
15100	Tunnel alignments	LineMember	
15101	Overhead Peck Detail	LineMember	
15102	Electricity transmission line	LineMember	
15103	Telephone line	LineMember	
15104	Pylon	PointMember	
15110	Point feature1	PointMember	Traditionally shown as black dots
15111	Point feature2	PointMember	Traditionally shown as black circles
15112	Miscellaneous name	TextMember	
15120	Antiquity site	PointMember	
15121	Antiquity building name	TextMember	
15122	Antiquity miscellaneous name	TextMember	
15200	Parish or Community Boundary	LineMember	
15201	District or LB Boundary	LineMember	
15202	County, Region or Island Boundary	LineMember	
15203	Parliamentary Boundary	LineMember	
15210	Boundary text	TextMember	
15300	Multi track railway	LineMember	
15301	Single track railway or siding	LineMember	
15302	Narrow gauge railway	LineMember	
15400	Standard contour line	LineMember	
15401	Index contour line	LineMember	
15403	Index contour label	TextMember	
15404	Spot height label	TextMember	

Feature code	Feature description	GML feature class	Notes
15405	Spot height position	PointMember	
15406	Air height position	PointMember	
15407	Air height label	TextMember	
15408	Triangulation Station	PointMember	
15409	Standard contour label	PointMember	
15410	Ridge or rock line	LineMember	
15442	Refuse or Slag Heap	AreaMember	
15450	Sand Pit	AreaMember	
15451	Gravel Pit	AreaMember	
15500	Coniferous woodland	AreaMember	
15501	Coniferous woodland and Shrub	AreaMember	
15502	Mixed woodland	AreaMember	
15503	Mixed woodland and Shrub	AreaMember	
15504	Broad-leafed woodland	AreaMember	
15505	Broad-leafed woodland and Shrub	AreaMember	
15506	Orchard	AreaMember	
15507	Shrub	AreaMember	
15508	Shrub and Heathland	AreaMember	
15509	Shrub and Unimproved Grass	AreaMember	
15510	Shrub and Unimproved Grass and Boulders	AreaMember	
15511	Shrub and Marsh	AreaMember	
15512	Shrub and Marsh and Heath	AreaMember	
15513	Shrub and Marsh and Unimproved Grass	AreaMember	
15514	Shrub and Heathland and Unimproved Grass	AreaMember	
15515	Shrub and Heathland and Boulders	AreaMember	
15516	Shrub and Boulders	AreaMember	
15517	Heathland	AreaMember	
15518	Heathland and Unimproved Grass	AreaMember	
15519	Heathland and Unimproved Grass and Boulders	AreaMember	
15520	Heathland and Boulders	AreaMember	
15521	Heathland and Marsh	AreaMember	
15522	Unimproved Grass	AreaMember	
15525	Unimproved Grass and Sand	AreaMember	
15524	Unimproved Grass and Shingle	AreaMember	
15522	Unimproved Grass	AreaMember	
15523	Unimproved Grass and Boulders	AreaMember	
15526	Marsh	AreaMember	
15527	Marsh and Unimproved Grass	AreaMember	
15528	Reeds	AreaMember	
15529	Inland Rock	AreaMember	
15530	Boulders	AreaMember	

Feature code	Feature description	GML feature class	Notes
15531	Boulders and Shingle	AreaMember	
15532	Boulders and Sand	AreaMember	
15533	Boulders and Mud	AreaMember	
15534	Shingle	AreaMember	
15535	Shingle and Sand	AreaMember	
15536	Shingle and Mud	AreaMember	
15537	Sand	AreaMember	
15538	Mud	AreaMember	
15540	Vegetation or Landform Limit	LineMember	
15550	Custom landform polygon	AreaMember	
15551	Custom landform line	LineMember	
15560	Top of standard slopes	LineMember	
15561	Top of large slopes	LineMember	
15562	Top of Cliff	LineMember	
15600	Water Feature	LineMember	
15603	Water name	TextMember	
15604	Mean High Water	LineMember	
15605	Mean Low Water	LineMember	
15606	Point feature water1	PointMember	Traditionally shown as blue dots
15607	Point feature water2	PointMember	Traditionally shown as blue circles
15608	Sea polygon	AreaMember	
15609	Inland water polygon	AreaMember	
15610	Standard flow arrow	PointMember	
15611	Large flow arrow	PointMember	
15700	General road casing	LineMember	
15701	General road name	TextMember	
15710	Motorway, alignment	RoadCLineMember	
15711	Motorway, road number	TextMember	
15712	Motorway, road name	TextMember	
15720	A Road, trunk, alignment	RoadCLineMember	
15721	A Road, trunk, road name	TextMember	
15722	A Road, trunk, road number	TextMember	
15723	A Road, primary, alignment	RoadCLineMember	
15724	A Road, primary, road name	TextMember	
15725	A Road, primary, road number	TextMember	
15726	A Road, primary and trunk, alignment	RoadCLineMember	
15727	A Road, primary and trunk, road name	TextMember	
15728	A Road, primary and trunk, road number	TextMember	
15729	A Road, alignment	RoadCLineMember	
15730	A Road, road name	TextMember	
15731	A Road, road number	TextMember	
15740	B Road, primary, alignment	RoadCLineMember	

Feature code	Feature description	GML feature class	Notes
15741	B Road, primary, road name	TextMember	
15742	B Road, primary, road number	TextMember	
15743	B Road, alignment	RoadCLineMember	
15744	B Road, road name	TextMember	
15745	B Road, road number	TextMember	
15750	Minor Road, alignment	RoadCLineMember	
15751	Minor Road, road name	TextMember	
15760	Local Street, alignment	RoadCLineMember	
15761	Local Street, road name	TextMember	
15770	Alleyway, alignment	RoadCLineMember	
15771	Alleyway, road name	TextMember	
15780	Private Road, Public Access, alignment	RoadCLineMember	
15781	Private Road, Public Access, road name	TextMember	
15782	Private Road, Restricted, alignment	RoadCLineMember	
15783	Private Road, Restricted, road name	TextMember	
15790	Pedestrianised Street, alignment	RoadCLineMember	
15791	Pedestrianised Street, road name	TextMember	
15792	Road Tunnel	RoadCLineMember	

Chapter 3 Cartographic style definitions

Symbol geometry

boulderGeometry

```
<polyline points='-0.154,0.236 -0.111,0.365 -0.116,0.501 -
0.165,0.616 -0.170,0.627 -0.264,0.724 -0.490,0.826 -0.682,0.889
-0.885,0.900 -1.083,0.858 -1.264,0.767 -1.415,0.631 -1.521,0.466
-1.558,0.199 -1.538,-0.071 -1.462,-0.329 -1.333,-0.566 -1.156,-
0.771' />
<polyline points='1.755,-0.819 1.534,-0.804 0.832,-0.857 0.129,-
0.824 -0.450,-0.769 -1.032,-0.767 -1.612,-0.819' />
<polyline points='1.640,-0.804 1.620,-0.589 1.392,-0.388 1.122,-
0.248' />
<polyline points='0.311,-0.526 0.520,-0.573 0.732,-0.554 0.930,-
0.472 1.093,-0.335 1.097,-0.329 1.101,-0.323 1.105,-0.317
1.108,-0.311 1.111,-0.304 1.113,-0.298 1.115,-0.291 1.117,-0.284
1.118,-0.277 1.118,-0.270 1.119,-0.263 1.118,-0.256 1.118,-0.249
1.117,-0.242 1.115,-0.235 1.113,-0.229 1.111,-0.222 1.108,-0.216
1.105,-0.209 1.101,-0.203 1.097,-0.198 1.093,-0.192 1.088,-0.187
1.083,-0.182 1.078,-0.177 1.073,-0.173 1.067,-0.169 1.061,-0.165
1.054,-0.162 0.637,0.198 0.393,0.388 0.118,0.530 -0.165,0.616 -
0.178,0.619' />
```

circleFillGeometry

```
<circle r='0.05' cx='0' cy='0.0'/>
```


circleGeometry

```
<circle r='0.375' cx='0' cy='0'/>
```

coniferousTreeGeometry

Arc geometry:

```
<polyline points='0,1.45 0,-1.55' />
<path d='M-1.3,-0.95a2 2 0 0 1 1.3 1.05a2 2 0 0 1 1.3 -1.05' />
<path d='M-0.9,0.3a2 2 0 0 1 0.9 0.85a2 2 0 0 1 0.9 -0.85' />
```

Linear geometry:

```
<polyline points='0.000,1.45 0.000,-1.55'/>
<polyline points='-1.303,-0.970 -1.168,-0.927 -1.037,-0.874 -
0.909,-0.814 -0.785,-0.746 -0.666,-0.670 -0.552,-0.586 -0.444,-
0.496 -0.342,-0.398 -0.246,-0.295 -0.156,-0.185 -0.074,-0.070
0.000,0.050 0.074,-0.070 0.156,-0.185 0.246,-0.295 0.342,-0.398
0.444,-0.496 0.552,-0.586 0.666,-0.670 0.785,-0.746 0.909,-0.814
1.037,-0.874 1.168,-0.927 1.303,-0.970'/>
<polyline points='-0.890,0.296 -0.769,0.364 -0.652,0.440 -
0.541,0.523 -0.435,0.613 -0.335,0.709 -0.241,0.811 -0.154,0.919
-0.073,1.032 0.000,1.150 0.072,1.034 0.151,0.923 0.236,0.816
0.328,0.715 0.427,0.620 0.530,0.531 0.639,0.449 0.753,0.374
0.871,0.306'/>
```

crossGeometry

```
<polyline points='0.000,-0.775 0.000,0.775'/>
<polyline points='-0.775,0.000 0.775,0.000'/>
```

nonconiferousTreeGeometry

Arc geometry:

```
<path d='M0,-1.6L-0.2,-0.8a0.6 0.6 0 1 0 -0.8 0.86a0.55 0.55 0 0
0 0.45 0.89a0.56 0.56 0 0 0 1.1 -0.0a0.55 0.55 0 0 0 0.45 -
0.89a0.6 0.6 0 1 0 -0.8 -0.86L0,-1.6z' />
```

Linear geometry:

```
<polyline points='-1.074,0.097 -1.210,-0.031 -1.299,-0.194 -
1.334,-0.377 -1.312,-0.561 -1.233,-0.730 -1.106,-0.866 -0.944,-
0.957 -0.761,-0.993 -0.576,-0.972 -0.407,-0.894 -0.270,-0.768 -
0.269,-0.765 -0.068,-1.539 0.012,-1.539 0.193,-0.756 0.193,-
0.756 0.329,-0.887 0.499,-0.969 0.685,-0.993 0.870,-0.959
1.036,-0.869 1.164,-0.731 1.244,-0.561 1.267,-0.374 1.230,-0.189
1.138,-0.025 0.999,0.102 1.087,0.259 1.119,0.436 1.094,0.615
1.012,0.775 0.883,0.901 0.720,0.979 0.541,1.000 0.541,1.000
0.464,1.184 0.331,1.331 0.156,1.427 -0.040,1.461 -0.236,1.427 -
0.411,1.331 -0.544,1.184 -0.621,1.000 -0.801,0.978 -0.964,0.900
-1.093,0.773 -1.175,0.611 -1.199,0.431 -1.164,0.254 -
1.074,0.097'/>
```

Geometry

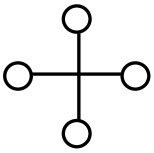
flowArrowGeometry

Geometry:

```
<polyline points=`0.0,0.0 3.438,0.0' />
<polyline points='0.5,0.5 0.0,0.0 0.5,-0.5' />
<polyline points='3.35,0.5 2.85,0.0 3.35,-0.5' />
<polyline points='3.938,0.5 3.438,0.0 3.938,-0.5' />
```

heritageSiteOfGeometry

Geometry:



```
<polyline points='-2.25,0.0 2.25,0'/>
<polyline points='0.0,-2.25 0.0,2.25'/>
<circle r='0.625' cx='0' cy='2.875'/>
<circle r='0.625' cx='0' cy='-2.875'/>
<circle r='0.625' cx='2.875' cy='0'/>
<circle r='0.625' cx='-2.875' cy='0'/>
```

triangulationStationGeometry

Geometry:

```
<polyline style='fill:none' points='0,-0.794 -1.375,-0.794
0.0,1.588 1.375,-0.794 0,-0.794'/>
<circle style='fill:#000000' r='0.0875' cx='0' cy='0.0'/>
```

pylonGeometry

Geometry:

```
<polyline points="-2,-2 -2,2 2,2 2,-2 -2,-2"/>
<polyline points="-2,-2 2,2"/>
<polyline points="-2,2 2,-2"/>
```

Fill symbols

bushFillSymbol

Geometry:

```
<polyline points='1,-1.493 -0.076,-1.493 0.452,-0.893 0.584,-
0.683 0.666,-0.449 0.693,-0.202 0.668,-0.088 0.596,0.005
0.491,0.058 0.284,0.082 0.078,0.046 -0.109,-0.046 -0.396,-0.268
-0.151,-0.027 0.055,0.248 0.218,0.55 0.335,0.873 0.35,1.027
0.311,1.176 0.224,1.303 0.016,1.447 -0.23,1.503 -0.391,1.485 -
0.54,1.421 -0.663,1.316 -0.866,1.029 -1.004,0.704 -1.07,0.358 -
1.061,0.006 -0.982,-0.383 -0.849,-0.758 -0.666,-1.111 -0.435,-
1.434 -0.396,-1.5' />
```

heathFillSymbol

Geometry:

```
<polyline points='-1.487,-0.75 -1.601,-0.208' />
<polyline points='-0.996,-0.613 -1.121,0.405' />
<polyline points='-0.499,-0.545 -0.55,0.695' />
<polyline points='0,-0.536 0,0.732' />
<polyline points='0.499,-0.545 0.55,0.695' />
<polyline points='0.996,-0.613 1.121,0.405' />
<polyline points='1.487,-0.75 1.601,-0.208' />
```

marshFillSymbol

Geometry:

```
<polyline points='4.258,0.000 0.452,0.000' />
<polyline points='-4.250,0.000 -0.444,0.000' />
<polyline points='-1.318,-0.517 1.317,-0.517' />
<polyline points='-0.444,0.000 -0.534,1.0' />
<polyline points='0.452,0.000 0.541,1.0' />
<polyline points='-0.001,0.013 -0.001,1.177' />
<polyline points='0.880,0.000 1.118,0.675' />
<polyline points='-0.873,0.000 -1.110,0.675' />
<polyline points='-1.318,0.000 -1.440,0.269' />
<polyline points='1.326,0.000 1.447,0.269' />
```

orchardFillSymbol

Arc geometry:

```
<path d='M0,0a0.7 0.7 0 1 0 -0.6 1.1a0.7 0.7 0 1 0 1.2,0.0a0.7
0.7 0 1 0 -0.6 -1.1z' />
<polyline points='0,-0.88 0,0' />
```

Linear geometry:

```
<polyline points='0.804,0.471 0.869,0.666 0.875,0.872
0.822,1.071 0.714,1.247 0.560,1.383 0.373,1.470 0.169,1.500 -
0.034,1.470 -0.221,1.382 -0.374,1.245 -0.482,1.069 -0.535,0.870
-0.528,0.664 -0.462,0.469'/>
<polyline points='-0.462,0.469 -0.665,0.428 -0.847,0.332 -
0.994,0.186 -1.092,0.005 -1.135,-0.197 -1.117,-0.403 -1.041,-
0.594 -0.913,-0.756 -0.744,-0.875 -0.548,-0.939 -0.342,-0.945 -
0.143,-0.891 0.033,-0.781 0.169,-0.626'/>
<polyline points='0.169,-0.626 0.169,-0.626 0.305,-0.780 0.480,-
0.889 0.679,-0.943 0.885,-0.937 1.080,-0.873 1.249,-0.755
1.377,-0.594 1.453,-0.402 1.472,-0.197 1.430,0.004 1.332,0.186
1.187,0.331 1.006,0.429 0.804,0.471'/>
<polyline points='0.171,-0.629 0.171,-1.497'/>
```

reedFillSymbol

Linear geometry:

```
style="stroke:#2E8FA2;fill:none;stroke-width:0.055">
<polyline points="0.000,-0.349 0.000,0.349"/>
<polyline points="-0.416,-0.422 -0.444,0.261"/>
<polyline points="0.416,-0.422 0.444,0.261"/>
<polyline points="0.883,-0.436 0.935,0.199"/>
<polyline points="-0.883,-0.436 -0.935,0.199"/>
<polyline points="-1.342,-0.459 -1.412,0.096"/>
<polyline points="1.342,-0.459 1.412,0.096"/>
<polyline points="-1.769,-0.492 -1.843,-0.049"/>
<polyline points="1.769,-0.492 1.843,-0.049"/>
<polyline points="-2.187,-0.633 -2.249,-0.334"/>
<polyline points="2.187,-0.633 2.249,-0.334"/>
```

rockFillSymbol

Style:
`stroke:#666666;fill:none;stroke-width:0.087`

Geometry:

```
<polyline points='-1.85,-0.834 -0.812,-0.834 -0.588,-0.766 -
0.4,-0.508' />
<polyline points='1.824,-0.834 1.272,-0.78 0.908,-0.666 0.888,-
0.658 0.866,-0.65 0.846,-0.644 0.824,-0.64 0.802,-0.636 0.78,-
0.634 0.758,-0.632 0.736,-0.632 0.714,-0.634 0.692,-0.636 0.67,-
0.64 0.662,-0.642 0.648,-0.646 0.628,-0.654 0.438,-0.786 0.622,-
0.66 0.662,-0.642 1.126,-0.438 1.48,-0.298 1.494,-0.292 1.510,-
0.284 1.524,-0.276 1.536,-0.268 1.550,-0.258 1.562,-0.248
1.574,-0.236 1.586,-0.224 1.596,-0.212 1.606,-0.198 1.614,-0.186
1.622,-0.170 1.628,-0.156 1.636,-0.142 1.640,-0.126 1.644,-0.110
1.648,-0.094 1.650,-0.078 1.650,-0.062 1.652,-0.046 1.650,-0.012
1.646,0.022 1.64,0.054 1.634,0.086 1.624,0.118 1.612,0.15
1.6,0.18 1.584,0.21 1.568,0.24 1.55,0.268 1.368,0.488 1.356,0.5
1.344,0.512 1.33,0.522 1.316,0.532 1.302,0.54 1.286,0.548
1.27,0.554 1.254,0.56 1.238,0.566 1.222,0.568 1.206,0.572
1.188,0.574 1.172,0.574 1.154,0.574 1.138,0.572 1.12,0.57
1.104,0.566 1.088,0.562 1.072,0.556 1.056,0.55 0.4,0.298 -
0.014,0.136 0.218,0.236 0.582,0.398 0.594,0.404 0.604,0.410
0.616,0.418 0.626,0.424 0.636,0.432 0.644,0.442 0.654,0.452
0.662,0.46 0.668,0.472 0.676,0.482 0.682,0.494 0.688,0.504
0.692,0.516 0.696,0.528 0.698,0.552 0.702,0.554 0.704,0.566
0.704,0.58 0.704,0.592 0.704,0.604 0.702,0.618 0.7,0.63
0.696,0.642 0.692,0.654 0.688,0.666 0.682,0.678 0.676,0.69
0.67,0.7 0.662,0.71 0.552,0.842 0.546,0.848 0.54,0.854
0.532,0.858 0.526,0.864 0.518,0.868 0.512,0.872 0.504,0.874
0.496,0.878 0.488,0.88 0.48,0.882 0.472,0.884 0.464,0.886
0.454,0.886 0.446,0.886 0.438,0.886 0.43,0.884 0.422,0.882
0.414,0.88 0.406,0.878 0.398,0.876 0.39,0.872 0.198,0.812 -
0.378,0.6 -0.794,0.408 -1.046,0.316 -1.058,0.31 -1.07,0.302 -
1.082,0.292 -1.094,0.282 -1.104,0.272 -1.114,0.262 -1.122,0.25 -
1.13,0.238 -1.138,0.226 -1.144,0.212 -1.15,0.2 -1.156,0.186 -
1.16,0.172 -1.164,0.158 -1.166,0.142 -1.168,0.128 -1.168,0.114 -
1.168,0.098 -1.166,0.084 -1.164,0.07 -1.16,0.056 -1.158,0.042 -
1.152,0.028 -1.146,0.014 -1.134,-0.014 -1.118,-0.04 -1.102,-
0.066 -1.084,-0.09 -1.066,-0.114 -1.046,-0.138 -1.028,-0.156 -
1.01,-0.172 -0.99,-0.188 -0.968,-0.202 -0.946,-0.216 -0.924,-
0.228' />
```

roughGrassFillSymbol

Style:
```
stroke:#669966;fill:none;stroke-width:0.087
```

Geometry:
```
<polyline points='0.000,-0.349 0.000,0.349' />
<polyline points='-0.416,-0.422 -0.444,0.261' />
<polyline points='0.416,-0.422 0.444,0.261' />
<polyline points='0.883,-0.436 0.935,0.199' />
<polyline points='-0.883,-0.436 -0.935,0.199' />
<polyline points='-1.342,-0.459 -1.412,0.096' />
<polyline points='1.342,-0.459 1.412,0.096' />
<polyline points='-1.769,-0.492 -1.843,-0.049' />
<polyline points='1.769,-0.492 1.843,-0.049' />
<polyline points='-2.187,-0.633 -2.249,-0.334' />
<polyline points='2.187,-0.633 2.249,-0.334' />
```

smallBoulderFillSymbol

Geometry:

```
<polyline points='-0.077,0.118 -0.055,0.183 -0.058,0.25 -
0.082,0.308 0.085,0.313 -0.131,0.362 -0.245,0.413 -0.341,0.445 -
0.443,0.45
0.542,0.429 0.632,0.384 -0.708,0.316 -0.760,0.233 -0.779,0.1 -
0.769, -0.036 -0.731,-0.170 -0.667,-0.283 -0.578,-0.386'/>
<polyline points='0.876,-0.41 0.767,-0.402 0.417,-0.429 0.065,-
0.412 0.225, 0.385 -0.516,-0.384 -0.806,-0.41'/>
<polyline points='0.82,-0.402 0.81,-0.295 0.696,-0.194 0.561,-
0.124'/>
<polyline points='0.155,-0.263 0.26,-0.286 0.366,-0.277 0.465,-
0.236 0.546, 0.167 0.548,-0.165 0.55,-0.162 0.553,-0.158 0.554,-
0.155 0.555,-0.152 0.556, -0.149 0.557,-0.146 0.558,-0.142
0.559,-0.139 0.559,-0.135 0.559,-0.132 0.559,-0.128 0.559,-0.125
0.559,-0.121 0.557,-0.117
0.557,-0.115 0.555, 0.111 0.554,-0.108 0.553,-0.105 0.550,-0.102
0.548,-0.099 0.547,-0.096 0.544,-0.094 0.542,-0.091 0.539,-0.089
0.535,-0.086 0.534,-0.085 0.530, 0.083 0.527,-0.081 0.318,0.099
0.196,0.194 0.059,0.265 -0.083,0.308 0.089,0.309'/>
```

smallBushFillSymbol

Geometry:

```
<polyline points='0.5,-0.746 -0.038,-0.746 0.226,-0.446 0.292,-
0.341 0.333,-0.224 0.346,-0.101 0.334,-0.044 0.298,0.002
0.245,0.029 0.142,0.041 0.039,0.023 -0.054,-0.023 -0.198,-0.134
-0.075,-0.013 0.027,0.124 0.109,0.275 0.167,0.436 0.175,0.513
0.155,0.588 0.112,0.651 0.008,0.723 -0.115,0.751 -0.195,0.742 -
0.27,0.71 -0.331,0.658 -0.433,0.514 -0.502,0.352 -0.535,0.179 -
0.53,0.003 -0.491,-0.191 -0.424,-0.379 -0.333,-0.555 -0.217,-
0.717 -0.198,-0.75' />
```

smallConiferousTreeFillSymbol

Arc geometry:

```
<polyline points='0,0.725 0,-0.775' />
<path d='M-0.65,-0.475a1 1 0 0 1 0.65 0.502a1 1 0 0 1 0.65 -
0.502' />
<path d='M-0.45,0.15a1 1 0 0 1 0.45 0.425a1 1 0 0 1 0.45 -0.425'
/>
```

Linear geometry:

```
<polyline points='0.0,0.725 0.0,-0.775'/>
<polyline points='-0.651,-0.485 -0.584,-0.463 -0.517,-0.437 -
0.454,-0.407 -0.392,-0.373 -0.333,-0.335 -0.276,-0.293 -0.222,-
0.248 -0.171,-0.199 -0.123,-0.147 -0.078,-0.092 -0.037,-0.035
0.0,-0.025 0.037,-0.035 0.078,-0.097 0.123,-0.147 0.171,-0.199
0.222,-0.248 0.276,-0.293 0.333,-0.335 0.392,-0.373 0.454,-0.407
0.517,-0.437 0.584,-0.463 0.651,-0.485'/>
<polyline points='-0.445,0.148 -0.384,0.182 -0.316,0.22 -
0.27,0.261 -0.217,0.306 -0.167,0.354 -0.120,0.405 -0.077,0.459 -
0.036,0.516 0.0,0.575 0.036,0.516 0.077,0.459 0.120,0.405
0.167,0.354 0.217,0.306 0.27,0.261 0.316,0.22 0.384,0.182
0.445,0.148'/>
```

smallNonconiferousTreeFillSymbol

Arc geometry:

```
<path d='M0,-0.8L-0.1,-0.4a0.3 0.3 0 1 0 -0.4 0.43a0.275 0.275 0
0 0 0.225 0.445a0.28 0.28 0 0 0 0.55 -0.0a0.275 0.275 0 0 0
0.225 -0.445a0.3 0.3 0 1 0 -0.4 -0.43L0,-0.8z' />
```

Linear geometry:

```
<polyline points='-0.537,0.087 -0.552,0.076 -0.566,0.064 -
0.580,0.052 -0.592,0.038 -0.604,0.024 -0.615,0.008 -0.625,-0.007
-0.634,-0.024 -0.642,-0.041 -0.649,-0.058 -0.655,-0.076 -0.660,-
0.094 -0.663,-0.112 -0.665,-0.131 -0.667,-0.149 -0.667,-0.168 -
0.666,-0.187 -0.663,-0.205 -0.660,-0.224 -0.655,-0.242 -0.650,-
0.259 -0.643,-0.277 -0.635,-0.294 -0.626,-0.310 -0.616,-0.326 -
0.605,-0.341 -0.593,-0.356 -0.581,-0.369 -0.567,-0.382 -0.553,-
0.394 -0.538,-0.405 -0.522,-0.415 -0.506,-0.424 -0.489,-0.433 -
0.471,-0.440 -0.454,-0.445 -0.436,-0.450 -0.417,-0.454 -0.399,-
0.456 -0.380,-0.458 -0.362,-0.458 -0.343,-0.457 -0.324,-0.455 -
0.306,-0.451 -0.288,-0.447 -0.270,-0.441 -0.253,-0.435 -0.236,-
0.427 -0.219,-0.418 -0.203,-0.408 -0.188,-0.397 -0.173,-0.386 -
0.160,-0.373 -0.147,-0.359 -0.135,-0.345 -0.134,-0.344 -0.033,-
0.731 -0.006,-0.731 0.097,-0.339 0.097,-0.339 0.195,-0.423
0.320,-0.457 0.447,-0.436 0.553,-0.364 0.619,-0.253 0.632,-0.124
0.590,-0.003 0.500,0.090 0.554,0.203 0.552,0.329 0.495,0.441
0.395,0.516 0.271,0.539 0.213,0.658 0.109,0.740 -0.019,0.769 -
0.148,0.740 -0.252,0.658 -0.310,0.539 -0.434,0.516 -0.535,0.440
-0.592,0.327 -0.592,0.201 -0.537,0.087'/>
```

smallRockFillSymbol

Geometry:

```
<polyline points='-0.925,-0.417 -0.406,-0.417 -0.294,-0.383 -0.200,-
0.254' />
<polyline points='0.912,-0.417 0.636,-0.390 0.454,-0.333 0.444,-0.329
0.433,-0.325 0.423,-0.322 0.412,-0.320 0.401,-0.318 0.390,-0.317
0.379,-0.316 0.368,-0.316 0.357,-0.317 0.346,-0.318 0.335,-0.320
0.331,-0.321 0.324,-0.323 0.314,-0.327 0.219,-0.393 0.311,-0.330
0.331,-0.321 0.563,-0.219 0.740,-0.149 0.747,-0.146 0.755,-0.142
0.762,-0.138 0.768,-0.134 0.775,-0.129 0.781,-0.124 0.787,-0.118
0.793,-0.112 0.798,-0.106 0.803,-0.099 0.807,-0.093 0.811,-0.085
0.814,-0.078 0.818,-0.071 0.820,-0.063 0.822,-0.055 0.824,-0.047
0.825,-0.039 0.825,-0.031 0.826,-0.023 0.825,-0.006 0.823,0.011
0.820,0.027 0.817,0.043 0.812,0.059 0.806,0.075 0.800,0.090
0.792,0.105 0.784,0.120 0.775,0.134 0.684,0.244 0.678,0.250
0.672,0.256 0.665,0.261 0.658,0.266 0.651,0.270 0.643,0.274
0.635,0.277 0.627,0.280 0.619,0.283 0.611,0.284 0.603,0.286
0.594,0.287 0.586,0.287 0.577,0.287 0.569,0.286 0.560,0.285
0.552,0.283 0.544,0.281 0.536,0.278 0.528,0.275 0.200,0.149 -
0.007,0.068 0.109,0.118 0.291,0.199 0.297,0.202 0.302,0.205
0.308,0.209 0.313,0.212 0.318,0.216 0.322,0.221 0.327,0.226
0.331,0.230 0.334,0.236 0.338,0.241 0.341,0.247 0.344,0.252
0.346,0.258 0.348,0.264 0.349,0.271 0.351,0.277 0.352,0.283
0.352,0.290 0.352,0.296 0.352,0.302 0.351,0.309 0.350,0.315
0.348,0.321 0.346,0.327 0.344,0.333 0.341,0.339 0.338,0.345
0.335,0.350 0.331,0.355 0.276,0.421 0.276,0.421 0.273,0.424
0.270,0.427 0.266,0.429 0.263,0.432 0.259,0.434 0.256,0.436
0.252,0.437 0.248,0.439 0.244,0.440 0.240,0.441 0.236,0.442
0.232,0.443 0.227,0.443 0.223,0.443 0.219,0.443 0.215,0.442
0.211,0.441 0.207,0.440 0.203,0.439 0.199,0.438 0.195,0.436
0.099,0.406 -0.189,0.300 -0.397,0.204 -0.523,0.158 -0.529,0.155 -
0.535,0.151 -0.541,0.146 -0.547,0.141 -0.552,0.136 -0.557,0.131 -
0.561,0.125 -0.565,0.119 -0.569,0.113 -0.572,0.106 -0.575,0.100 -
0.578,0.093 -0.580,0.086 -0.582,0.079 -0.583,0.071 -0.584,0.064 -
0.584,0.057 -0.584,0.049 -0.583,0.042 -0.582,0.035 -0.580,0.028 -
0.579,0.021 -0.576,0.014 -0.573,0.007 -0.567,-0.007 -0.559,-0.020 -
0.551,-0.033 -0.542,-0.045 -0.533,-0.057 -0.523,-0.069 -0.514,-0.078
-0.505,-0.086 -0.495,-0.094 -0.484,-0.101 -0.473,-0.108 -0.462,-
0.114' />
```

Standard Style 2 legend

What follows is a legend for Style 2. The five other stylesheets were all based on stylesheet2 and all six are available as SVGZ. See OS VectorMap Local web page.

Sample map areas for each style have also been produced.

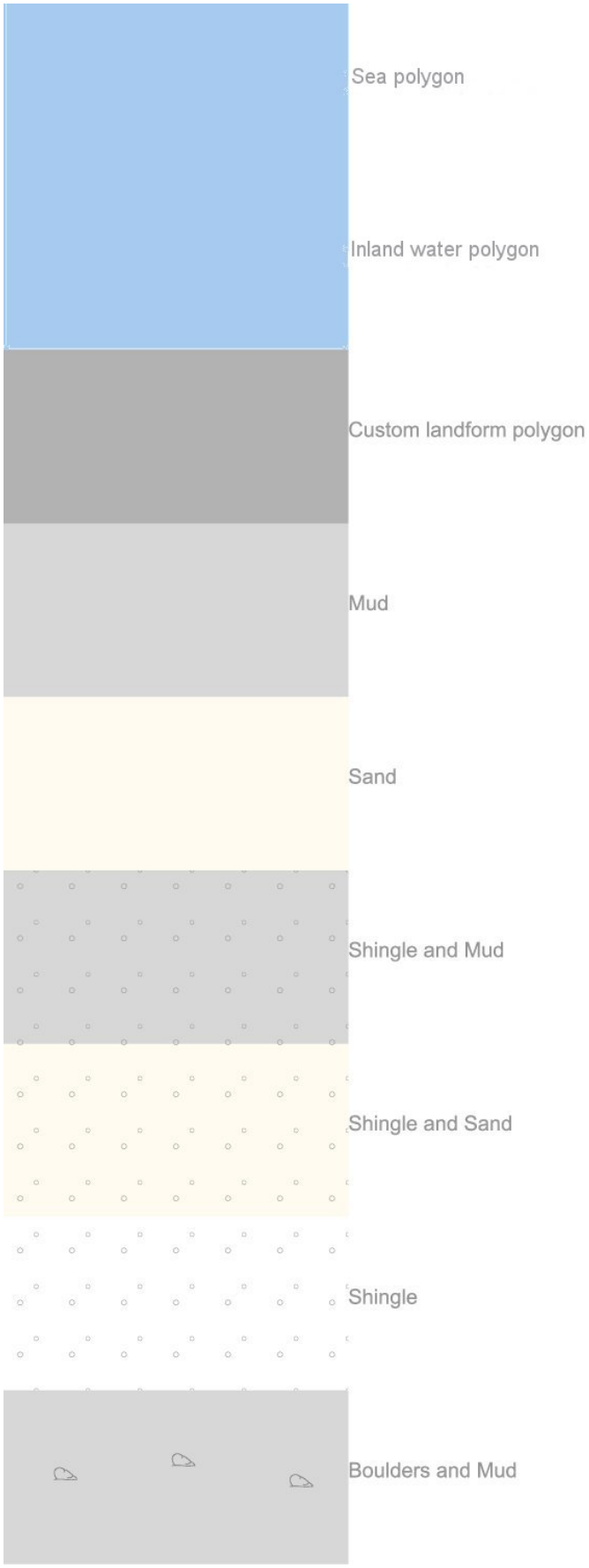
The main difference between the stylesheets is the colour schemes but as an example of their structure and appearance, style 2 has been illustrated on the following pages.

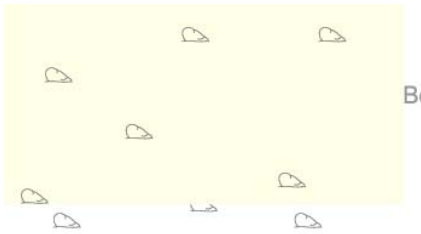
Where styles do not exist for this style then the depictions in the legend will be blank, for example, minor road alignment.

Styles are grouped under the following headings:

- Polygon fills
- Line features
- Landplan names
- Symbols
- text

Polygon fills





Boulders and Sand

Boulders and Shingle

Boulders

Inland Rock

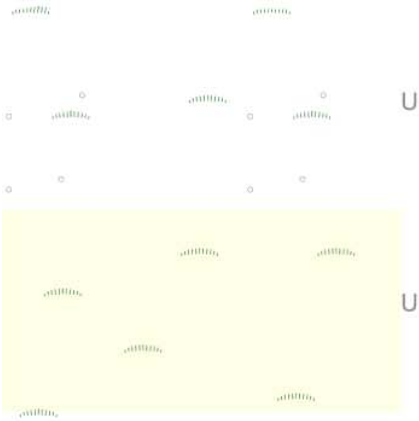
Reeds

Marsh and Unimproved Grass

Marsh

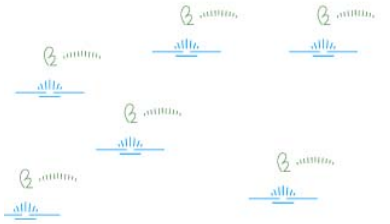
Unimproved Grass and Boulders

Unimproved Grass


Unimproved Grass and Shingle
Unimproved Grass and Sand
Unimproved Grass
Heathland and Marsh
Heathland and Boulders
Heathland and Unimproved Grass and Boulder
Heathland and Unimproved Grass
Heathland
Shrub and Boulders

Shrub and Heathland and Boulders

Shrub and Heathland and Unimproved Grass



Shrub and Marsh and Unimproved Grass

Shrub and Marsh and Heath

Shrub and Marsh

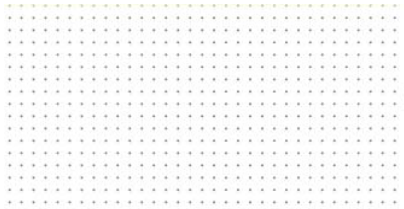
Shrub and Unimproved Grass and Boulders

Shrub and Unimproved Grass

Shrub and Heathland

Shrub


Orchard
Broad-leafed woodland and Shrub
Broad-leafed woodland
Mixed woodland and Shrub
Mixed woodland
Coniferous woodland and Shrub
Coniferous woodland
Gravel Pit
Sand Pit



Refuse or Slag Heap

Urban extent

Glasshouse polygon

Building polygon

Line features

Pedestrianised Street, alignment

Private Road, Restricted, alignment

Private Road, Public Access, alignment

Alleyway, alignment

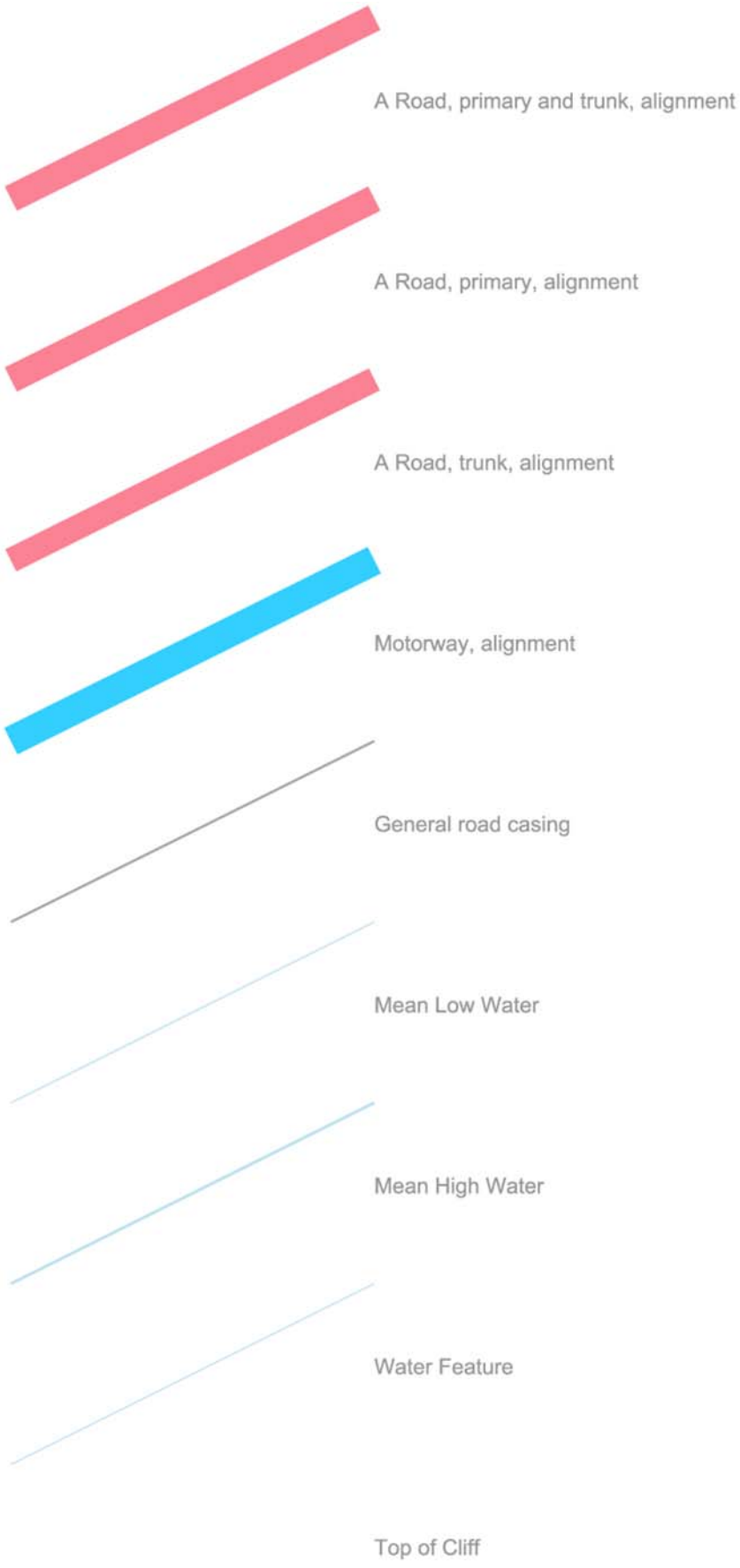
Local Street, alignment

Minor Road, alignment

B Road, alignment

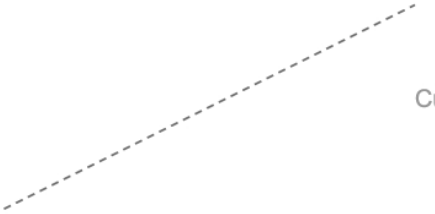
B Road, primary, alignment

A Road, alignment


A Road, primary and trunk, alignment
A Road, primary, alignment
A Road, trunk, alignment
Motorway, alignment
General road casing
Mean Low Water
Mean High Water
Water Feature
Top of Cliff

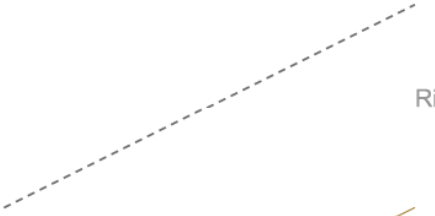
Top of large slopes

Top of standard slopes



Custom landform line

Vegetation or Landform Limit

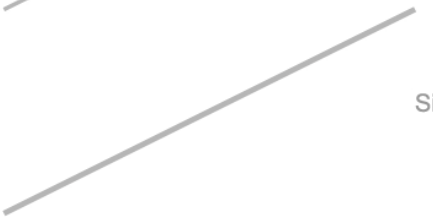


Ridge or rock line

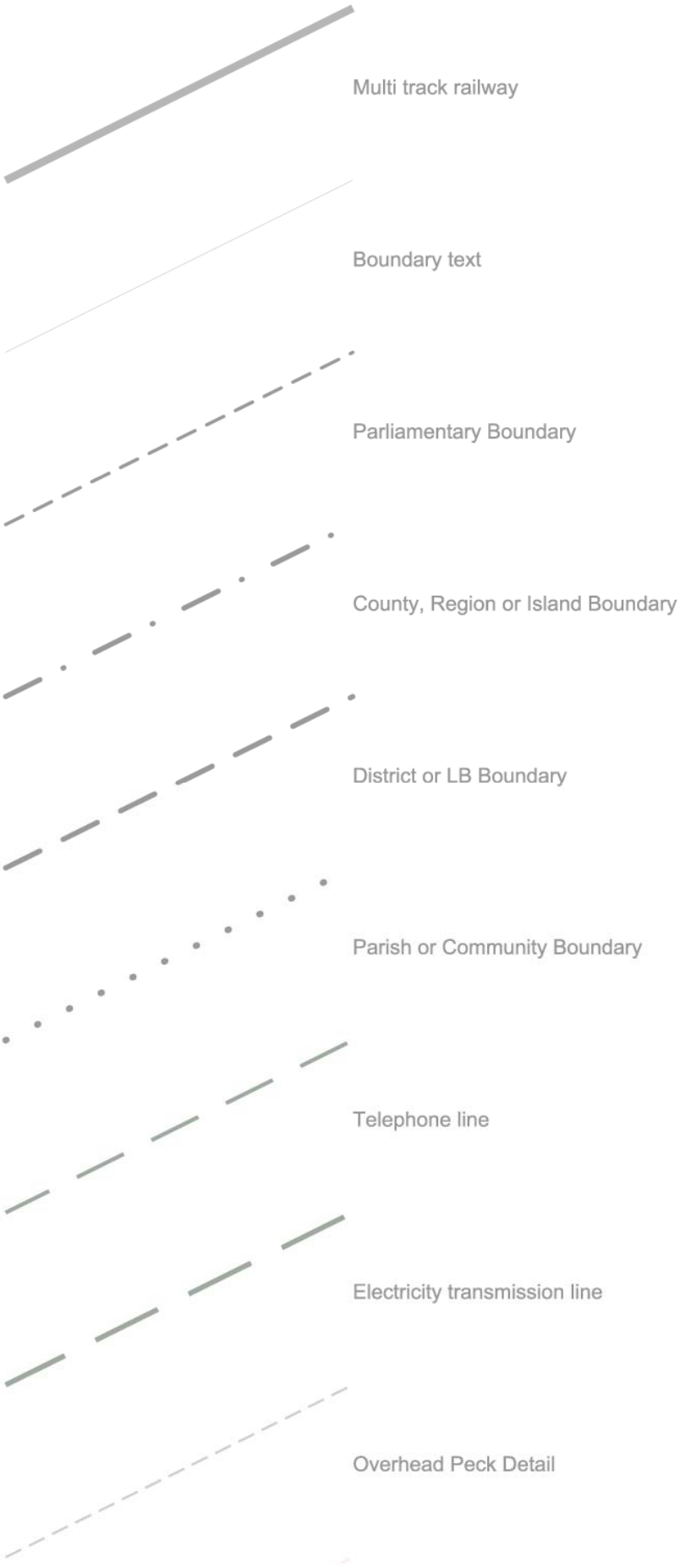
Index contour line

Standard contour line

Narrow gauge railway



Single track railway or siding


Multi track railway
Boundary text
Parliamentary Boundary
County, Region or Island Boundary
District or LB Boundary
Parish or Community Boundary
Telephone line
Electricity transmission line
Overhead Peck Detail


Tunnel alignments
Rural general pecked detail
Urban general pecked detail
Rural general line detail
Urban general line detail
Glasshouse outline
Overhead building line
Important building outline
Building outline

Landplan text

Motorway, road name	Motorway, road name
Motorway, road number	Motorway, road number
General road name	General road name
Water name	Water name
Air height label	Air height label
Spot height label	Spot height label
Contour label	Contour label
Antiquity miscellaneous name	Antiquity miscellaneous name
Antiquity building name	Antiquity building name
Miscellaneous name	Miscellaneous name
Important building name	Important building name
Building name	Building name

Symbols

Large flow arrow

Standard flow arrow

Point feature water2

Point feature water1


Triangulation Station

Air height position

Spot height position


Antiquity site

Point feature2

Point feature1


Pylon

Road text

	Pedestrianised Street, road name
	Private Road, Restricted, road name
	Private Road, Public Access, road name
	Alleyway, road name
	Local Street, road name
	Minor Road, road name
B Road, road number	B Road, road number
	B Road, road name
B Road, primary, road number	B Road, primary, road number
	B Road, primary, road name
A Road, road number	A Road, road number
	A Road, road name
A Road, primary and trunk, road number	A Road, primary and trunk, road number
	A Road, primary and trunk, road name
A Road, primary, road number	A Road, primary, road number
	A Road, primary, road name
A Road, trunk, road number	A Road, trunk, road number
	A Road, trunk, road name

Chapter 4 Style specifications tables

Chapter 4 provides tables that illustrate the six styles available for this product.

Black and White Style graphic specification table

FC 15103 Telephone line LineMember has been removed from this product

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15010	Building outline	lineMember	#000000	1.10			
15011	Important building outline	lineMember	#000000	2.20			Square linecap
15012	Overhead building line	lineMember	#000000	1.53			
15013	Glasshouse outline	lineMember	#000000	0.91			
15014	Building polygon	polygonMember			#FFFFFF		Pattern applied
15015	Important building name	textMember			#000000	Arial	
15016	Glasshouse polygon	polygonMember					Pattern applied
15017	Building name	textMember			#000000	Arial	
15030	Urban extent	polygonMember					
15031	Urban general line detail	lineMember	#000000	1.10			
15032	Rural general line detail	lineMember	#000000	1.10			
15033	Urban general pecked detail	lineMember	#000000	1.10			5m line, 3m gap dashed line
15044	Rural general pecked detail	lineMember	#000000	1.10			5m line, 3m gap dashed line
15100	Tunnel alignments	lineMember	#000000	1.58			6m line, 3m gap dashed line
15101	Overhead Peck Detail	lineMember	#000000	1.53			10m line, 5m gap dashed line
15102	Electricity transmission line	lineMember	#000000	2.70			40m line, 20m gap dashed line
15103	Telephone line	lineMember	#000000	1.98			30m line, 18m gap dashed line
15104	Pylon	pointMember	#000000	1.00	(#FFFFFF)		
15110	Point feature1	pointMember	#000000	1.00	#000000		
15111	Point feature2	pointMember	#000000	1.00	#000000		
15112	Miscellaneous name	textMember			#000000	Arial	
15120	Antiquity site	pointMember	#000000	1.00			
15121	Antiquity building name	textMember			#000000	Arial italic	
15122	Antiquity miscellaneous name	textMember			#000000	Arial italic	
15200	Parish or Community Boundary	lineMember	#000000	3.75			0.45m line, 20m gap 'dotted' line Round line cap
15201	District or LB Boundary	lineMember	#000000	3.00			22m line, 15m gap dashed line Round line cap
15202	County, Region or Island Boundary	lineMember	#000000	3.00			22m line, 15m gap dashed line; 0.45m 20m 'dotted' line Round line cap
15203	Parliamentary Boundary	lineMember	#000000	2.00			11m line, 7.5m gap dashed line Round line cap
15210	Boundary text	textMember					
15300	Multi track railway	lineMember	#BDBDBD	4.50			

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15301	Single track railway or siding	lineMember	#BDBDBD	2.65			
15302	Narrow gauge railway	lineMember	#BDBDBD	2.00			
15400	Standard contour line	lineMember	#000000	0.45			
15401	Index contour line	lineMember	#000000	0.65			
15403	Index contour label	textMember			#000000		
15404	Spot height label	textMember			#000000		
15405	Spot height position	pointMember	#000000	1.00	#000000		
15406	Air height position	pointMember	#000000	1.00	#000000		
15407	Air height label	textMember			#000000		
15408	Triangulation Station	pointMember	#000000	1.00			
15409	Standard contour label	textMember			#000000		
15410	Ridge or rock line	lineMember					
15442	Refuse or Slag Heap	polygonMember					Pattern applied
15450	Sand Pit	polygonMember					Pattern applied
15451	Gravel Pit	polygonMember					Pattern applied
15500	Coniferous woodland	polygonMember					Pattern applied
15501	Coniferous woodland and Shrub	polygonMember					Pattern applied
15502	Mixed woodland	polygonMember					Pattern applied
15503	Mixed woodland and Shrub	polygonMember					Pattern applied
15503	Mixed woodland and Shrub	polygonMember					Pattern applied
15504	Broad-leafed woodland	polygonMember					Pattern applied
15505	Broad-leafed woodland and Shrub	polygonMember					Pattern applied
15506	Orchard	polygonMember					Pattern applied
15507	Shrub	polygonMember					Pattern applied
15508	Shrub and Heathland	polygonMember					Pattern applied
15509	Shrub and Unimproved Grass	polygonMember					Pattern applied
15510	Shrub and Unimproved Grass and Boulders	polygonMember					Pattern applied
15511	Shrub and Marsh	polygonMember					Pattern applied
15512	Shrub and Marsh and Heath	polygonMember					Pattern applied
15513	Shrub and Marsh and Unimproved Grass	polygonMember					Pattern applied
15514	Shrub and Heathland and Unimproved Grass	polygonMember					Pattern applied
15515	Shrub and Heathland and Boulders	polygonMember					Pattern applied
15516	Shrub and Boulders	polygonMember					Pattern applied
15517	Heathland	polygonMember					Pattern applied
15518	Heathland and Unimproved Grass	polygonMember					Pattern applied
15519	Heathland and Unimproved Grass and Boulders	polygonMember					Pattern applied
15520	Heathland and Boulders	polygonMember					Pattern applied
15521	Heathland and Marsh	polygonMember					Pattern applied
15522	Unimproved Grass	polygonMember					Pattern applied
15523	Unimproved Grass and Boulders	polygonMember					Pattern applied
15524	Unimproved Grass and Shingle	polygonMember					Pattern applied
15525	Unimproved Grass and Sand	polygonMember					Pattern applied

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15526	Marsh	polygonMember					Pattern applied
15527	Marsh and Unimproved Grass	polygonMember					Pattern applied
15528	Reeds	polygonMember			#FFFFFF		Pattern applied
15529	Inland Rock	polygonMember					Pattern applied
15530	Boulders	polygonMember					Pattern applied
15531	Boulders and Shingle	polygonMember					Pattern applied
15532	Boulders and Sand	polygonMember			#FFFFFF		Pattern applied
15533	Boulders and Mud	polygonMember					Pattern applied
15534	Shingle	polygonMember					Pattern applied
15535	Shingle and Sand	polygonMember			#FFFFFF		Pattern applied
15536	Shingle and Mud	polygonMember					Pattern applied
15537	Sand	polygonMember			#FFFFFF		
15538	Mud	polygonMember					
15540	Vegetation or Landform Limit	lineMember					
15550	Custom landform polygon	polygonMember			#000000		
15551	Custom landform line	lineMember					
15560	Top of standard slopes	lineMember					
15561	Top of large slopes	lineMember					
15562	Top of Cliff	lineMember					
15600	Water Feature	lineMember	#000000	0.70			
15603	Water name	textMember			#000000	Arial italic	
15604	Mean High Water	lineMember	#000000	1.50			
15605	Mean Low Water	lineMember	#000000	0.70			
15606	Point feature water1	pointMember	#000000	1.00	#000000		
15607	Point feature water2	pointMember	#000000	1.00	#000000		
15608	Sea polygon	polygonMember			#FFFFFF		
15609	Inland water polygon	polygonMember			#FFFFFF		
15610	Standard flow arrow	pointMember	#000000	1.40			
15611	Large flow arrow	pointMember	#000000	2.28			
15700	General road casing	lineMember	#000000	1.40			
15701	General road name	textMember			#000000	Arial narrow	
15710	Motorway, alignment	roadCLineMember					
15711	Motorway, road number	textMember	#FFFFFF	0.30	#000000		
15712	Motorway, road name	textMember					
15720	A Road, trunk, alignment	roadCLineMember					
15721	A Road, trunk, road name	textMember					
15722	A Road, trunk, road number	textMember	#FFFFFF	0.30	#000000		
15723	A Road, primary, alignment	roadCLineMember					
15724	A Road, primary, road name	textMember					
15725	A Road, primary, road number	textMember	#FFFFFF	0.30	#000000		
15726	A Road, primary and trunk, alignment	roadCLineMember					
15727	A Road, primary and trunk, road name	textMember					
15728	A Road, primary and trunk, road number	textMember	#FFFFFF	0.30	#000000		
15729	A Road, alignment	roadCLineMember					
15730	A Road, road name	textMember					
15731	A Road, road number	textMember	#FFFFFF	0.30	#000000		
15740	B Road, primary, alignment	roadCLineMember					
15741	B Road, primary, road name	textMember					
15742	B Road, primary, road number	textMember	#FFFFFF	0.30	#000000		
15743	B Road, alignment	roadCLineMember					
15744	B Road, road name	textMember					
15745	B Road, road number	textMember	#FFFFFF	0.30	#000000		
15750	Minor Road, alignment	roadCLineMember					
15751	Minor Road, road name	textMember					

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15760	Local Street, alignment	roadCLineMember					
15761	Local Street, road name	textMember					
15770	Alleyway, alignment	roadCLineMember					
15771	Alleyway, road name	textMember					
15780	Private Road, Public Access, alignment	roadCLineMember					
15781	Private Road, Public Access, road name	textMember					
15782	Private Road, Restricted, alignment	roadCLineMember					
15783	Private Road, Restricted, road name	textMember					
15790	Pedestrianised Street, alignment	roadCLineMember					
15791	Pedestrianised Street, road name	textMember					
15792	Road Tunnel	roadCLineMember					

Streetview Style graphic specification table

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15010	Building outline	lineMember					
15011	Important building outline	lineMember	#7E7762	2.10			Square linecap
15012	Overhead building line	lineMember					
15013	Glasshouse outline	lineMember					
15014	Building polygon	polygonMember			#F6D58B		
15015	Important building name	textMember			#82756B	Arial	
15016	Glasshouse polygon	polygonMember					
15017	Building name	textMember			#828282	Arial	
15030	Urban extent	polygonMember					
15031	Urban general line detail	lineMember					
15032	Rural general line detail	lineMember					
15033	Urban general pecked detail	lineMember					
15044	Rural general pecked detail	lineMember					
15100	Tunnel alignments	lineMember	#A6A6A1	1.40			6m line, 3m gap dashed line
15101	Overhead Peck Detail	lineMember					
15102	Electricity transmission line	lineMember					
15103	Telephone line	lineMember					
15104	Pylon	pointMember					
15110	Point feature1	pointMember					
15111	Point feature2	pointMember					
15112	Miscellaneous name	textMember			#343434	Arial	(Only OS Street View names)
15120	Antiquity site	pointMember					
15121	Antiquity building name	textMember					
15122	Antiquity miscellaneous name	textMember					
15200	Parish or Community Boundary	lineMember					
15201	District or LB Boundary	lineMember					
15202	County, Region or Island Boundary	lineMember					
15203	Parliamentary Boundary	lineMember					
15210	Boundary text	textMember					
15300	Multi track railway	lineMember	#424242	3.50			
15301	Single track railway or siding	lineMember	#424242	2.00			
15302	Narrow gauge railway	lineMember	#424242	1.40			
15400	Standard contour line	lineMember					
15401	Index contour line	lineMember					
15403	Index contour label	textMember					
15404	Spot height label	textMember					
15405	Spot height position	pointMember					

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15406	Air height position	pointMember					
15407	Air height label	textMember					
15408	Triangulation Station	pointMember					
15409	Standard contour label	textMember					
15410	Ridge or rock line	lineMember					
15442	Refuse or Slag Heap	polygonMember					
15450	Sand Pit	polygonMember			#FFFFBD		
15451	Gravel Pit	polygonMember					
15500	Coniferous woodland	polygonMember			#C5EE83		
15501	Coniferous woodland and Shrub	polygonMember			#C5EE83		
15502	Mixed woodland	polygonMember			#C5EE83		
15503	Mixed woodland and Shrub	polygonMember			#C5EE83		
15503	Mixed woodland and Shrub	polygonMember			#C5EE83		
15504	Broad-leafed woodland	polygonMember			#C5EE83		
15505	Broad-leafed woodland and Shrub	polygonMember			#C5EE83		
15506	Orchard	polygonMember					
15507	Shrub	polygonMember					
15508	Shrub and Heathland	polygonMember					
15509	Shrub and Unimproved Grass	polygonMember					
15510	Shrub and Unimproved Grass and Boulders	polygonMember					
15511	Shrub and Marsh	polygonMember					
15512	Shrub and Marsh and Heath	polygonMember					
15513	Shrub and Marsh and Unimproved Grass	polygonMember					
15514	Shrub and Heathland and Unimproved Grass	polygonMember					
15515	Shrub and Heathland and Boulders	polygonMember					
15516	Shrub and Boulders	polygonMember					
15517	Heathland	polygonMember					
15518	Heathland and Unimproved Grass	polygonMember					
15519	Heathland and Unimproved Grass and Boulders	polygonMember					
15520	Heathland and Boulders	polygonMember					
15521	Heathland and Marsh	polygonMember					
15522	Unimproved Grass	polygonMember					
15523	Unimproved Grass and Boulders	polygonMember					
15524	Unimproved Grass and Shingle	polygonMember					
15525	Unimproved Grass and Sand	polygonMember					
15526	Marsh	polygonMember					
15527	Marsh and Unimproved Grass	polygonMember					
15528	Reeds	polygonMember			#D6EDFC		
15529	Inland Rock	polygonMember					
15530	Boulders	polygonMember					
15531	Boulders and Shingle	polygonMember					
15532	Boulders and Sand	polygonMember			#FFFFBD		
15533	Boulders and Mud	polygonMember					
15534	Shingle	polygonMember					
15535	Shingle and Sand	polygonMember			#FFFFBD		
15536	Shingle and Mud	polygonMember					
15537	Sand	polygonMember			#FFFFBD		
15538	Mud	polygonMember					
15540	Vegetation or Landform Limit	lineMember					
15550	Custom landform polygon	polygonMember					
15551	Custom landform line	lineMember					
15560	Top of standard slopes	lineMember					
15561	Top of large slopes	lineMember					
15562	Top of Cliff	lineMember					
15600	Water Feature	lineMember	#54B5EB	2.10			
15603	Water name	textMember			#78CEF0	Arial bold	
15604	Mean High Water	lineMember	#54B5EB	2.10			

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15605	Mean Low Water	lineMember					
15606	Point feature water1	pointMember					
15607	Point feature water2	pointMember					
15608	Sea polygon	polygonMember			#D6EDFC		
15609	Inland water polygon	polygonMember			#D6EDFC		
15610	Standard flow arrow	pointMember					
15611	Large flow arrow	pointMember					
15700	General road casing	lineMember	#A6A6A1	1.40			
15701	General road name	textMember					
15710	Motorway, alignment	roadCLineMember	#33CFFF	15.00		Butt linecap, round linejoin	
15711	Motorway, road number	textMember					
15712	Motorway, road name	textMember					
15720	A Road, trunk, alignment	roadCLineMember	#FA8294	13.70		Butt linecap, round linejoin	
15721	A Road, trunk, road name	textMember					
15722	A Road, trunk, road number	textMember					
15723	A Road, primary, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15724	A Road, primary, road name	textMember					
15725	A Road, primary, road number	textMember					
15726	A Road, primary and trunk, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15727	A Road, primary and trunk, road name	textMember					
15728	A Road, primary and trunk, road number	textMember					
15729	A Road, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15730	A Road, road name	textMember					
15731	A Road, road number	textMember					
15740	B Road, primary, alignment	roadCLineMember	#F7AB57	15.00		Butt linecap, round linejoin	
15741	B Road, primary, road name	textMember					
15742	B Road, primary, road number	textMember					
15743	B Road, alignment	roadCLineMember	#F7AB57	13.70		Butt linecap, round linejoin	
15744	B Road, road name	textMember					
15745	B Road, road number	textMember					
15750	Minor Road, alignment	roadCLineMember	#E1E1E1	13.70		Butt linecap, round linejoin	
15751	Minor Road, road name	textMember					
15760	Local Street, alignment	roadCLineMember					
15761	Local Street, road name	textMember					
15770	Alleyway, alignment	roadCLineMember					
15771	Alleyway, road name	textMember					
15780	Private Road, Public Access, alignment	roadCLineMember	#E1E1E1	7.10		Butt linecap, round linejoin	
15781	Private Road, Public Access, road name	textMember					
15782	Private Road, Restricted, alignment	roadCLineMember					

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15783	Private Road, Restricted, road name	textMember					
15790	Pedestrianised Street, alignment	roadCLineMember					
15791	Pedestrianised Street, road name	textMember					
15792	Road Tunnel,	roadCLineMember					

1: 10 000 Scale Raster Style graphic specification table

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15010	Building outline	lineMember	#000000	2.00			
15011	Important building outline	lineMember	#000000	4.00			Square linecap
15012	Overhead building line	lineMember	#000000	2.00			
15013	Glasshouse outline	lineMember	#000000	2.00			
15014	Building polygon	polygonMember			#FFEBA8		
15015	Important building name	textMember			#000000	Arial	
15016	Glasshouse polygon	polygonMember					Pattern applied
15017	Building name	textMember			#000000	Arial	
15030	Urban extent	polygonMember					
15031	Urban general line detail	lineMember	#000000	2.00			
15032	Rural general line detail	lineMember	#000000	2.00			
15033	Urban general pecked detail	lineMember	#000000	2.00			5m line, 3m gap dashed line
15044	Rural general pecked detail	lineMember	#000000	2.00			5m line, 3m gap dashed line
15100	Tunnel alignments	lineMember	#000000	2.00			6m line, 3m gap dashed line
15101	Overhead Peck Detail	lineMember	#000000	2.00			10m line, 5m gap dashed line
15102	Electricity transmission line	lineMember	#000000	2.00			40m line, 22.5m gap dashed line
15103	Telephone line	lineMember	#000000	1.00			25m line, 30m gap dashed line
15104	Pylon	pointMember	#000000	1.00	(#FFFFFF)		
15110	Point feature1	pointMember	#000000	1.50	#000000		
15111	Point feature2	pointMember	#000000	1.50	#000000		
15112	Miscellaneous name	textMember			#000000	Microsoft Sans Serif	
15120	Antiquity site	pointMember	#000000	1.00			
15121	Antiquity building name	textMember			#000000	Arial italic	
15122	Antiquity miscellaneous name	textMember			#000000	Arial italic	
15200	Parish or Community Boundary	lineMember	#000000	6.00			6m line, 27m gap dashed line Round line cap
15201	District or LB Boundary	lineMember	#000000	5.00			60m line, 30m gap dashed line Round line cap
15202	County, Region or Island Boundary	lineMember	#000000	6.60			60m line, 60m gap dashed line;6m line 60m gap dashed line Round line cap

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15203	Parliamentary Boundary	lineMember	#000000	4.00			35m line, 20m gap dashed line Round line cap
15210	Boundary text	textMember					
15300	Multi track railway	lineMember	#000000	6.00			
15301	Single track railway or siding	lineMember	#000000	2.00			
15302	Narrow gauge railway	lineMember	#000000	2.00			
15400	Standard contour line	lineMember	#991A00	1.50			
15401	Index contour line	lineMember	#991A00	3.00			
15403	Index contour label	textMember			#991A00		
15404	Spot height label	textMember			#000000		
15405	Spot height position	pointMember	#000000	1.50	#000000		
15406	Air height position	pointMember	#991A00	1.50	#991A00		
15407	Air height label	textMember			#991A00		
15408	Triangulation Station	pointMember	#000000	1.50			
15409	Standard contour label	textMember			#991A00		
15410	Ridge or rock line	lineMember					
15442	Refuse or Slag Heap	polygonMember					Pattern applied
15450	Sand Pit	polygonMember			#FFFFB3		Pattern applied
15451	Gravel Pit	polygonMember					Pattern applied
15500	Coniferous woodland	polygonMember			#E6FFB9		Pattern applied
15501	Coniferous woodland and Shrub	polygonMember			#E6FFB9		Pattern applied
15502	Mixed woodland	polygonMember			#E6FFB9		Pattern applied
15503	Mixed woodland and Shrub	polygonMember			#E6FFB9		Pattern applied
15503	Mixed woodland and Shrub	polygonMember			#E6FFB9		Pattern applied
15504	Broad-leafed woodland	polygonMember			#E6FFB9		Pattern applied
15505	Broad-leafed woodland and Shrub	polygonMember			#E6FFB9		Pattern applied
15506	Orchard	polygonMember					Pattern applied
15507	Shrub	polygonMember					Pattern applied
15508	Shrub and Heathland	polygonMember					Pattern applied
15509	Shrub and Unimproved Grass	polygonMember					Pattern applied
15510	Shrub and Unimproved Grass and Boulders	polygonMember					Pattern applied
15511	Shrub and Marsh	polygonMember					Pattern applied
15512	Shrub and Marsh and Heath	polygonMember					Pattern applied
15513	Shrub and Marsh and Unimproved Grass	polygonMember					Pattern applied
15514	Shrub and Heathland and Unimproved Grass	polygonMember					Pattern applied
15515	Shrub and Heathland and Boulders	polygonMember					Pattern applied
15516	Shrub and Boulders	polygonMember					Pattern applied
15517	Heathland	polygonMember					Pattern applied
15518	Heathland and Unimproved Grass	polygonMember					Pattern applied
15519	Heathland and Unimproved Grass and Boulders	polygonMember					Pattern applied
15520	Heathland and Boulders	polygonMember					Pattern applied
15521	Heathland and Marsh	polygonMember					Pattern applied
15522	Unimproved Grass	polygonMember					Pattern applied
15523	Unimproved Grass and Boulders	polygonMember					Pattern applied
15524	Unimproved Grass and Shingle	polygonMember					Pattern applied
15525	Unimproved Grass and Sand	polygonMember					Pattern applied
15526	Marsh	polygonMember					Pattern applied
15527	Marsh and Unimproved Grass	polygonMember					Pattern applied
15528	Reeds	polygonMember			#E1F5FF		Pattern applied
15529	Inland Rock	polygonMember					Pattern applied
15530	Boulders	polygonMember					Pattern applied
15531	Boulders and Shingle	polygonMember					Pattern applied
15532	Boulders and Sand	polygonMember			#FFFFB3		Pattern applied
15533	Boulders and Mud	polygonMember			#E6E6E6		Pattern applied
15534	Shingle	polygonMember					Pattern applied
15535	Shingle and Sand	polygonMember			#FFFFB3		Pattern applied

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15536	Shingle and Mud	polygonMember			#E6E6E6		Pattern applied
15537	Sand	polygonMember			#FFFFB3		
15538	Mud	polygonMember			#E6E6E6		
15540	Vegetation or Landform Limit	lineMember					
15550	Custom landform polygon	polygonMember			#000000		
15551	Custom landform line	lineMember	#000000	2.50			3.5m line 3m gap dashed line
15560	Top of standard slopes	lineMember					(Show if symbol easily created)
15561	Top of large slopes	lineMember					(Show if symbol easily created)
15562	Top of Cliff	lineMember					(Show if symbol easily created)
15600	Water Feature	lineMember	#00FFFF	2.50			
15603	Water name	textMember			#00FFFF	Arial bold	
15604	Mean High Water	lineMember	#00FFFF	4.00			
15605	Mean Low Water	lineMember	#00FFFF	2.50			
15606	Point feature water1	pointMember	#00FFFF	1.50	#FFFFFF		
15607	Point feature water2	pointMember	#00FFFF	1.50	#00FFFF		
15608	Sea polygon	polygonMember			#E1F5FF		
15609	Inland water polygon	polygonMember			#E1F5FF		
15610	Standard flow arrow	pointMember	#00FFFF	2.10			
15611	Large flow arrow	pointMember	#00FFFF	3.41			
15700	General road casing	lineMember	#000000	2.00			
15701	General road name	textMember			#000000	Arial narrow	
15710	Motorway, alignment	roadCLineMember					
15711	Motorway, road number	textMember					
15712	Motorway, road name	textMember					
15720	A Road, trunk, alignment	roadCLineMember					
15721	A Road, trunk, road name	textMember					
15722	A Road, trunk, road number	textMember					
15723	A Road, primary, alignment	roadCLineMember					
15724	A Road, primary, road name	textMember					
15725	A Road, primary, road number	textMember					
15726	A Road, primary and trunk, alignment	roadCLineMember					
15727	A Road, primary and trunk, road name	textMember					
15728	A Road, primary and trunk, road number	textMember					
15729	A Road, alignment	roadCLineMember					
15730	A Road, road name	textMember					
15731	A Road, road number	textMember					
15740	B Road, primary, alignment	roadCLineMember					
15741	B Road, primary, road name	textMember					
15742	B Road, primary, road number	textMember					
15743	B Road, alignment	roadCLineMember					
15744	B Road, road name	textMember					
15745	B Road, road number	textMember					
15750	Minor Road, alignment	roadCLineMember					
15751	Minor Road, road name	textMember					
15760	Local Street, alignment	roadCLineMember					
15761	Local Street, road name	textMember					
15770	Alleyway, alignment	roadCLineMember					
15771	Alleyway, road name	textMember					
15780	Private Road, Public Access, alignment	roadCLineMember					
15781	Private Road, Public Access, road name	textMember					
15782	Private Road, Restricted, alignment	roadCLineMember					
15783	Private Road, Restricted, road name	textMember					

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15790	Pedestrianised Street, alignment	roadCLineMember					
15791	Pedestrianised Street, road name	textMember					
15792	Road Tunnel	roadCLineMember					

Standard Style 1 graphic specification table

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15010	Building outline	lineMember	#7E7762	0.10			
15011	Important building outline	lineMember	#ADA084	1.00			Square linecap
15012	Overhead building line	lineMember	#C2C2C2	0.64			
15013	Glasshouse outline	lineMember	#E0CFA3	0.38			
15014	Building polygon	polygonMember			#E8D6B0		
15015	Important building name	textMember			#ADA084	Arial	
15016	Glasshouse polygon	polygonMember					Pattern applied
15017	Building name	textMember			#828282	Arial	
15030	Urban extent	polygonMember					
15031	Urban general line detail	lineMember	#C2C2C2	0.60			
15032	Rural general line detail	lineMember	#C2C2C2	0.60			
15033	Urban general pecked detail	lineMember	#C2C2C2	0.60			5m line, 3m gap dashed line
15044	Rural general pecked detail	lineMember	#C2C2C2	0.60			5m line, 3m gap dashed line
15100	Tunnel alignments	lineMember	#FFEDF8	0.79			6m line, 3m gap dashed line
15101	Overhead Peck Detail	lineMember	#C2C2C2	0.64			10m line, 5m gap dashed line
15102	Electricity transmission line	lineMember	#9EAA9E	1.50			20m line, 10m gap dashed line
15103	Telephone line	lineMember	#9EAA9E	1.12			15m line, 9m gap dashed line
15104	Pylon	pointMember	#4EB39E	0.75	(#FFFFFF)		
15110	Point feature1	pointMember	#9EAA9E	0.75	#9EAA9E		
15111	Point feature2	pointMember	#828282	0.75	#828282		
15112	Miscellaneous name	textMember			#828282	Arial	
15120	Antiquity site	pointMember	#828282	0.75			
15121	Antiquity building name	textMember			#828282	Arial italic	
15122	Antiquity miscellaneous name	textMember			#828282	Arial italic	
15200	Parish or Community Boundary	lineMember	#858585	1.88			0.45m line, 13.3m gap 'dotted' line Round line cap
15201	District or LB Boundary	lineMember	#858585	1.50			11m line, 7.5m gap dashed line Round line cap
15202	County, Region or Island Boundary	lineMember	#858585	1.50			11m line, 7.5m gap dashed line; 0.22m 10m 'dotted' line Round line cap
15203	Parliamentary Boundary	lineMember	#858585	1.00			11m line, 7.5m gap dashed line Round line cap
15210	Boundary text	textMember					
15300	Multi track railway	lineMember	#A5A5A5	2.25			

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15301	Single track railway or siding	lineMember	#A5A5A5	1.32			
15302	Narrow gauge railway	lineMember	#A5A5A5	1.00			
15400	Standard contour line	lineMember					
15401	Index contour line	lineMember					
15403	Index contour label	textMember					
15404	Spot height label	textMember			#828282		
15405	Spot height position	pointMember	#828282	0.75	#828282		
15406	Air height position	pointMember	#A3803B	0.75	#A3803B		
15407	Air height label	textMember			#A3803B		
15408	Triangulation Station	pointMember	#828282	0.75			
15409	Standard contour label	textMember					
15410	Ridge or rock line	lineMember	#5A5A5A	0.50			3.5m line 3m gap dashed line
15442	Refuse or Slag Heap	polygonMember					Pattern applied
15450	Sand Pit	polygonMember			#FFFFE6		Pattern applied
15451	Gravel Pit	polygonMember					Pattern applied
15500	Coniferous woodland	polygonMember			#D9ECD0		Pattern applied
15501	Coniferous woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15502	Mixed woodland	polygonMember			#D9ECD0		Pattern applied
15503	Mixed woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15503	Mixed woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15504	Broad-leafed woodland	polygonMember			#D9ECD0		Pattern applied
15505	Broad-leafed woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15506	Orchard	polygonMember					Pattern applied
15507	Shrub	polygonMember					Pattern applied
15508	Shrub and Heathland	polygonMember					Pattern applied
15509	Shrub and Unimproved Grass	polygonMember					Pattern applied
15510	Shrub and Unimproved Grass and Boulders	polygonMember					Pattern applied
15511	Shrub and Marsh	polygonMember					Pattern applied
15512	Shrub and Marsh and Heath	polygonMember					Pattern applied
15513	Shrub and Marsh and Unimproved Grass	polygonMember					Pattern applied
15514	Shrub and Heathland and Unimproved Grass	polygonMember					Pattern applied
15515	Shrub and Heathland and Boulders	polygonMember					Pattern applied
15516	Shrub and Boulders	polygonMember					Pattern applied
15517	Heathland	polygonMember					Pattern applied
15518	Heathland and Unimproved Grass	polygonMember					Pattern applied
15519	Heathland and Unimproved Grass and Boulders	polygonMember					Pattern applied
15520	Heathland and Boulders	polygonMember					Pattern applied
15521	Heathland and Marsh	polygonMember					Pattern applied
15522	Unimproved Grass	polygonMember					Pattern applied
15523	Unimproved Grass and Boulders	polygonMember					Pattern applied
15524	Unimproved Grass and Shingle	polygonMember					Pattern applied
15525	Unimproved Grass and Sand	polygonMember					Pattern applied
15526	Marsh	polygonMember					Pattern applied
15527	Marsh and Unimproved Grass	polygonMember					Pattern applied
15528	Reeds	polygonMember			#E4F1FB		Pattern applied
15529	Inland Rock	polygonMember					Pattern applied
15530	Boulders	polygonMember					Pattern applied
15531	Boulders and Shingle	polygonMember					Pattern applied
15532	Boulders and Sand	polygonMember			#FFFFE6		Pattern applied
15533	Boulders and Mud	polygonMember			#D9D7D4		Pattern applied
15534	Shingle	polygonMember					Pattern applied
15535	Shingle and Sand	polygonMember			#FFFFE6		Pattern applied
15536	Shingle and Mud	polygonMember			#D9D7D4		Pattern applied
15537	Sand	polygonMember			#FFFFE6		
15538	Mud	polygonMember			#D9D7D4		

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15540	Vegetation or Landform Limit	lineMember					
15550	Custom landform polygon	polygonMember			#9C9C9C		
15551	Custom landform line	lineMember	#5A5A5A	0.50			3.5m line 3m gap dashed line
15560	Top of standard slopes	lineMember					
15561	Top of large slopes	lineMember					
15562	Top of Cliff	lineMember					
15600	Water Feature	lineMember	#BBDFEF	0.70			
15603	Water name	textMember			#54B4EB	Arial italic	
15604	Mean High Water	lineMember	#54B4EB	0.75			
15605	Mean Low Water	lineMember	#54B4EB	0.35			
15606	Point feature water1	pointMember	#54B4EB	0.75	#FFFFFF		
15607	Point feature water2	pointMember	#54B4EB	0.75	#54B4EB		
15608	Sea polygon	polygonMember			#BBDFEF		
15609	Inland water polygon	polygonMember			#BBDFEF		
15610	Standard flow arrow	pointMember	#54B4EB	0.88			
15611	Large flow arrow	pointMember	#54B4EB	1.75			
15700	General road casing	lineMember					
15701	General road name	textMember					
15710	Motorway, alignment	roadCLineMember	#33CFFF	10.00		Butt linecap, round linejoin	
15711	Motorway, road number	textMember	#696969	0.15	#33CFFF		
15712	Motorway, road name	textMember	#696969	0.15	#33CFFF		
15720	A Road, trunk, alignment	roadCLineMember	#FA8294	7.85		Butt linecap, round linejoin	
15721	A Road, trunk, road name	textMember			#696969		
15722	A Road, trunk, road number	textMember	#696969	0.15	#FA8294		
15723	A Road, primary, alignment	roadCLineMember	#FA8294	8.50		Butt linecap, round linejoin	
15724	A Road, primary, road name	textMember			#696969		
15725	A Road, primary, road number	textMember	#696969	0.15	#FA8294		
15726	A Road, primary and trunk, alignment	roadCLineMember	#FA8294	8.50		Butt linecap, round linejoin	
15727	A Road, primary and trunk, road name	textMember			#696969		
15728	A Road, primary and trunk, road number	textMember	#696969	0.15	#FA8294		
15729	A Road, alignment	roadCLineMember	#FA8294	8.50		Butt linecap, round linejoin	
15730	A Road, road name	textMember			#696969		
15731	A Road, road number	textMember	#696969	0.15	#FA8294		
15740	B Road, primary, alignment	roadCLineMember	#F7AB57	8.50		Butt linecap, round linejoin	
15741	B Road, primary, road name	textMember			#696969		
15742	B Road, primary, road number	textMember	#696969	0.15	#F7AB57		
15743	B Road, alignment	roadCLineMember	#F7AB57	7.85		Butt linecap, round linejoin	
15744	B Road, road name	textMember			#696969		
15745	B Road, road number	textMember	#696969	0.15	#F7AB57		
15750	Minor Road, alignment	roadCLineMember	#FBEE2D	7.50		Butt linecap, round linejoin	

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15751	Minor Road, road name	textMember			#696969		
15760	Local Street, alignment	roadCLineMember					
15761	Local Street, road name	textMember			#696969		
15770	Alleyway, alignment	roadCLineMember					
15771	Alleyway, road name	textMember			#696969		
15780	Private Road, Public Access, alignment	roadCLineMember					
15781	Private Road, Public Access, road name	textMember			#696969		
15782	Private Road, Restricted, alignment	roadCLineMember					
15783	Private Road, Restricted, road name	textMember			#696969		
15790	Pedestrianised Street, alignment	roadCLineMember					
15791	Pedestrianised Street, road name	textMember			#696969		
15792	Road Tunnel	roadCLineMember					

Standard Style 2 graphic specification table

Member code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15010	Building outline	lineMember	#7E7762	0.20			
15011	Important building outline	lineMember	#ADA084	2.00			Square linecap
15012	Overhead building line	lineMember	#C2C2C2	1.26			
15013	Glasshouse outline	lineMember	#E0CFA3	0.75			
15014	Building polygon	polygonMember			#E8D6B0		
15015	Important building name	textMember			#ADA084	Arial	
15016	Glasshouse polygon	polygonMember					Pattern applied
15017	Building name	textMember			#828282	Arial	
15030	Urban extent	polygonMember					
15031	Urban general line detail	lineMember	#C2C2C2	1.20			
15032	Rural general line detail	lineMember	#C2C2C2	1.20			
15033	Urban general pecked detail	lineMember	#C2C2C2	1.22			5m line, 3m gap dashed line
15044	Rural general pecked detail	lineMember	#C2C2C2	1.22			5m line, 3m gap dashed line
15100	Tunnel alignments	lineMember	#FFEDF8	1.58			6m line, 3m gap dashed line
15101	Overhead Peck Detail	lineMember	#C2C2C2	1.28			10m line, 5m gap dashed line
15102	Electricity transmission line	lineMember	#9EAA9E	3.00			40m line, 20m gap dashed line
15103	Telephone line	lineMember	#9EAA9E	2.25			30m line, 18m gap dashed line
15104	Pylon	pointMember	#4EB39E	1.00	(#FFFFFF)		
15110	Point Member1	pointMember	#9EAA9E	1.00	#9EAA9E		
15111	Point Member2	pointMember	#828282	1.00	#828282		
15112	Miscellaneous name	textMember			#828282	Arial	
15120	Antiquity site	pointMember	#828282	1.00			
15121	Antiquity building name	textMember			#828282	Arial italic	
15122	Antiquity miscellaneous name	textMember			#828282	Arial italic	
15200	Parish or Community Boundary	lineMember	#858585	3.75			0.45m line, 20m gap 'dotted' line Round line cap
15201	District or LB Boundary	lineMember	#858585	3.00			22m line, 15m gap dashed line Round line cap

Member code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15202	County, Region or Island Boundary	lineMember	#858585	3.00			22m line, 15m gap dashed line; 0.45m 20m 'dotted' line Round line cap
15203	Parliamentary Boundary	lineMember	#858585	2.00			11m line, 7.5m gap dashed line Round line cap
15210	Boundary text	textMember					
15300	Multi track railway	lineMember	#A5A5A5	4.50			
15301	Single track railway or siding	lineMember	#A5A5A5	2.65			
15302	Narrow gauge railway	lineMember	#A5A5A5	2.00			
15400	Standard contour line	lineMember	#A3803B	0.45			
15401	Index contour line	lineMember	#A3803B	0.65			
15403	Index contour label	textMember			#A3803B		
15404	Spot height label	textMember			#828282		
15405	Spot height position	pointMember	#828282	1.00	#828282		
15406	Air height position	pointMember	#A3803B	1.00	#A3803B		
15407	Air height label	textMember			#A3803B		
15408	Triangulation Station	pointMember	#828282	1.00			
15409	Standard contour label	textMember			#A3803B		
15410	Ridge or rock line	lineMember	#5A5A5A	1.00			3.5m line 3m gap dashed line
15442	Refuse or Slag Heap	polygonMember					Pattern applied
15450	Sand Pit	polygonMember			#FFFFE6		Pattern applied
15451	Gravel Pit	polygonMember					Pattern applied
15500	Coniferous woodland	polygonMember			#D9ECD0		Pattern applied
15501	Coniferous woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15502	Mixed woodland	polygonMember			#D9ECD0		Pattern applied
15503	Mixed woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15503	Mixed woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15504	Broad-leafed woodland	polygonMember			#D9ECD0		Pattern applied
15505	Broad-leafed woodland and Shrub	polygonMember			#D9ECD0		Pattern applied
15506	Orchard	polygonMember					Pattern applied
15507	Shrub	polygonMember					Pattern applied
15508	Shrub and Heathland	polygonMember					Pattern applied
15509	Shrub and Unimproved Grass	polygonMember					Pattern applied
15510	Shrub and Unimproved Grass and Boulders	polygonMember					Pattern applied
15511	Shrub and Marsh	polygonMember					Pattern applied
15512	Shrub and Marsh and Heath	polygonMember					Pattern applied
15513	Shrub and Marsh and Unimproved Grass	polygonMember					Pattern applied
15514	Shrub and Heathland and Unimproved Grass	polygonMember					Pattern applied
15515	Shrub and Heathland and Boulders	polygonMember					Pattern applied
15516	Shrub and Boulders	polygonMember					Pattern applied
15517	Heathland	polygonMember					Pattern applied
15518	Heathland and Unimproved Grass	polygonMember					Pattern applied
15519	Heathland and Unimproved Grass and Boulders	polygonMember					Pattern applied
15520	Heathland and Boulders	polygonMember					Pattern applied
15521	Heathland and Marsh	polygonMember					Pattern applied
15522	Unimproved Grass	polygonMember					Pattern applied
15523	Unimproved Grass and Boulders	polygonMember					Pattern applied
15524	Unimproved Grass and Shingle	polygonMember					Pattern applied
15525	Unimproved Grass and Sand	polygonMember					Pattern applied
15526	Marsh	polygonMember					Pattern applied
15527	Marsh and Unimproved Grass	polygonMember					Pattern applied

Member code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15528	Reeds	polygonMember			#E4F1FB		Pattern applied
15529	Inland Rock	polygonMember					Pattern applied
15530	Boulders	polygonMember					Pattern applied
15531	Boulders and Shingle	polygonMember					Pattern applied
15532	Boulders and Sand	polygonMember			#FFFFE6		Pattern applied
15533	Boulders and Mud	polygonMember			#D9D7D4		Pattern applied
15534	Shingle	polygonMember					Pattern applied
15535	Shingle and Sand	polygonMember			#FFFFE6		Pattern applied
15536	Shingle and Mud	polygonMember			#D9D7D4		Pattern applied
15537	Sand	polygonMember			#FFFFE6		
15538	Mud	polygonMember			#D9D7D4		
15540	Vegetation or Landform Limit	lineMember					
15550	Custom landform polygon	polygonMember			#9C9C9C		
15551	Custom landform line	lineMember	#5A5A5A	1.00			3.5m line 3m gap dashed line
15560	Top of standard slopes	lineMember					
15561	Top of large slopes	lineMember					
15562	Top of Cliff	lineMember					
15600	Water Member	lineMember	#BBDFEF	0.70			
15603	Water name	textMember			#BBDFEF	Arial italic	
15604	Mean High Water	lineMember	#BBDFEF	1.50			
15605	Mean Low Water	lineMember	#BBDFEF	0.70			
15606	Point Member water1	pointMember	#BBDFEF	1.00	#FFFFFF		
15607	Point Member water2	pointMember	#BBDFEF	1.00	#BBDFEF		
15608	Sea polygon	polygonMember			#BBDFEF		
15609	Inland water polygon	polygonMember			#BBDFEF		
15610	Standard flow arrow	pointMember	#BBDFEF	1.40			
15611	Large flow arrow	pointMember	#BBDFEF	2.28			
15700	General road casing	lineMember	#A6A6A1	1.33			
15701	General road name	textMember			#696969	Arial narrow	
15710	Motorway, alignment	roadCLlineMember	#33CFFF	16.30		Butt linecap, round linejoin	
15711	Motorway, road number	textMember	#FFFFFF	0.30	#33CFFF		
15712	Motorway, road name	textMember					
15720	A Road, trunk, alignment	roadCLineMember	#FA8294	13.70		Butt linecap, round linejoin	
15721	A Road, trunk, road name	textMember					
15722	A Road, trunk, road number	textMember	#FFFFFF	0.30	#FA8294		
15723	A Road, primary, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15724	A Road, primary, road name	textMember					
15725	A Road, primary, road number	textMember	#FFFFFF	0.30	#FA8294		
15726	A Road, primary and trunk, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15727	A Road, primary and trunk, road name	textMember					
15728	A Road, primary and trunk, road number	textMember	#FFFFFF	0.30	#FA8294		
15729	A Road, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15730	A Road, road name	textMember					
15731	A Road, road number	textMember	#FFFFFF	0.30	#FA8294		
15740	B Road, primary, alignment	roadCLineMember	#F7AB57	15.00		Butt linecap, round linejoin	
15741	B Road, primary, road name	textMember					

Member code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15742	B Road, primary, road number	textMember	#FFFFFF	0.30	#F7AB57		
15743	B Road, alignment	roadCLineMember	#F7AB57	13.70		Butt linecap, round linejoin	
15744	B Road, road name	textMember					
15745	B Road, road number	textMember	#FFFFFF	0.30	#F7AB57		
15750	Minor Road, alignment	roadCLineMember	#FBEE2D	13.00		Butt linecap, round linejoin	
15751	Minor Road, road name	textMember					
15760	Local Street, alignment	roadCLineMember					
15761	Local Street, road name	textMember					
15770	Alleyway, alignment	roadCLineMember					
15771	Alleyway, road name	textMember					
15780	Private Road, Public Access, alignment	roadCLineMember					
15781	Private Road, Public Access, road name	textMember					
15782	Private Road, Restricted, alignment	roadCLineMember					
15783	Private Road, Restricted, road name	textMember					
15790	Pedestrianised Street, alignment	roadCLineMember					
15791	Pedestrianised Street, road name	textMember					
15792	Road Tunnel	roadCLineMember					

Standard Style 3 graphic specification table

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15010	Building outline	lineMember					
15011	Important building outline	lineMember			#ADA084		Square linecap
15012	Overhead building line	lineMember					
15013	Glasshouse outline	lineMember					
15014	Building polygon	polygonMember			#E8D6B0		
15015	Important building name	textMember			#ADA084	Arial	
15016	Glasshouse polygon	polygonMember					
15017	Building name	textMember					
15030	Urban extent	polygonMember					
15031	Urban general line detail	lineMember					
15032	Rural general line detail	lineMember	#C2C2C2	1.20			
15033	Urban general pecked detail	lineMember					
15044	Rural general pecked detail	lineMember	#C2C2C2	1.22			5m line, 3m gap dashed line
15100	Tunnel alignments	lineMember	#9C9C9C	1.58			6m line, 3m gap dashed line
15101	Overhead Peck Detail	lineMember					
15102	Electricity transmission line	lineMember					
15103	Telephone line	lineMember					
15104	Pylon	pointMember					
15110	Point feature1	pointMember					
15111	Point feature2	pointMember					
15112	Miscellaneous name	textMember			#828282	Arial	(Only larger or more important names)
15120	Antiquity site	pointMember					
15121	Antiquity building name	textMember					
15122	Antiquity miscellaneous name	textMember					

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15200	Parish or Community Boundary	lineMember					
15201	District or LB Boundary	lineMember					
15202	County, Region or Island Boundary	lineMember					
15203	Parliamentary Boundary	lineMember					
15210	Boundary text	textMember					
15300	Multi track railway	lineMember	#646464	4.50			
15301	Single track railway or siding	lineMember	#646464	2.65			
15302	Narrow gauge railway	lineMember	#646464	2.00			
15400	Standard contour line	lineMember	#A3803B	0.70			
15401	Index contour line	lineMember	#A3803B	1.00			
15403	Index contour label	textMember			#A3803B		
15404	Spot height label	textMember					
15405	Spot height position	pointMember					
15406	Air height position	pointMember					
15407	Air height label	textMember					
15408	Triangulation Station	pointMember					
15409	Standard contour label	textMember			#A3803B		
15410	Ridge or rock line	lineMember					
15442	Refuse or Slag Heap	polygonMember					
15450	Sand Pit	polygonMember			#FFFFE6		
15451	Gravel Pit	polygonMember					
15500	Coniferous woodland	polygonMember			#D9ECD0		
15501	Coniferous woodland and Shrub	polygonMember			#D9ECD0		
15502	Mixed woodland	polygonMember			#D9ECD0		
15503	Mixed woodland and Shrub	polygonMember			#D9ECD0		
15503	Mixed woodland and Shrub	polygonMember			#D9ECD0		
15504	Broad-leafed woodland	polygonMember			#D9ECD0		
15505	Broad-leafed woodland and Shrub	polygonMember			#D9ECD0		
15506	Orchard	polygonMember					
15507	Shrub	polygonMember					
15508	Shrub and Heathland	polygonMember					
15509	Shrub and Unimproved Grass	polygonMember					
15510	Shrub and Unimproved Grass and Boulders	polygonMember					
15511	Shrub and Marsh	polygonMember					
15512	Shrub and Marsh and Heath	polygonMember					
15513	Shrub and Marsh and Unimproved Grass	polygonMember					
15514	Shrub and Heathland and Unimproved Grass	polygonMember					
15515	Shrub and Heathland and Boulders	polygonMember					
15516	Shrub and Boulders	polygonMember					
15517	Heathland	polygonMember					
15518	Heathland and Unimproved Grass	polygonMember					
15519	Heathland and Unimproved Grass and Boulders	polygonMember					
15520	Heathland and Boulders	polygonMember					
15521	Heathland and Marsh	polygonMember					
15522	Unimproved Grass	polygonMember					
15523	Unimproved Grass and Boulders	polygonMember					
15524	Unimproved Grass and Shingle	polygonMember					
15525	Unimproved Grass and Sand	polygonMember					
15526	Marsh	polygonMember					
15527	Marsh and Unimproved Grass	polygonMember					
15528	Reeds	polygonMember			#BBDFEF		
15529	Inland Rock	polygonMember					
15530	Boulders	polygonMember					

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15531	Boulders and Shingle	polygonMember					
15532	Boulders and Sand	polygonMember			#FFFFE6		
15533	Boulders and Mud	polygonMember			#D9D7D4		
15534	Shingle	polygonMember					
15535	Shingle and Sand	polygonMember			#FFFFE6		
15536	Shingle and Mud	polygonMember			#D9D7D4		
15537	Sand	polygonMember			#FFFFE6		
15538	Mud	polygonMember			#D9D7D4		
15540	Vegetation or Landform Limit	lineMember					
15550	Custom landform polygon	polygonMember			#828282		
15551	Custom landform line	lineMember					
15560	Top of standard slopes	lineMember					
15561	Top of large slopes	lineMember					
15562	Top of Cliff	lineMember					
15600	Water Feature	lineMember	#BBDFEF	0.70			
15603	Water name	textMember			#BBDFEF	Arial italic	
15604	Mean High Water	lineMember					
15605	Mean Low Water	lineMember					
15606	Point feature water1	pointMember					
15607	Point feature water2	pointMember					
15608	Sea polygon	polygonMember			#BBDFEF		
15609	Inland water polygon	polygonMember			#BBDFEF		
15610	Standard flow arrow	pointMember					
15611	Large flow arrow	pointMember					
15700	General road casing	lineMember	#646464	1.60			
15701	General road name	textMember					
15710	Motorway, alignment	roadCLlineMember	#33CFFF	16.30		Butt linecap, round linejoin	
15711	Motorway, road number	textMember			#33CFFF		
15712	Motorway, road name	textMember			#33CFFF		
15720	A Road, trunk, alignment	roadCLineMember	#FA8294	13.70		Butt linecap, round linejoin	
15721	A Road, trunk, road name	textMember					
15722	A Road, trunk, road number	textMember			#FA8294		
15723	A Road, primary, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15724	A Road, primary, road name	textMember					
15725	A Road, primary, road number	textMember			#FA8294		
15726	A Road, primary and trunk, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15727	A Road, primary and trunk, road name	textMember					
15728	A Road, primary and trunk, road number	textMember			#FA8294		
15729	A Road, alignment	roadCLineMember	#FA8294	15.00		Butt linecap, round linejoin	
15730	A Road, road name	textMember					
15731	A Road, road number	textMember			#FA8294		
15740	B Road, primary, alignment	roadCLineMember	#F7AB57	15.00		Butt linecap, round linejoin	
15741	B Road, primary, road name	textMember					
15742	B Road, primary, road number	textMember			#F7AB57		
15743	B Road, alignment	roadCLineMember	#F7AB57	13.70		Butt linecap, round linejoin	

Feature code	OS VectorMap Local description	MemberType	Stroke colour	Stroke width (ground metres, m)	Fill colour	Font	Further description
15744	B Road, road name	textMember					
15745	B Road, road number	textMember			#F7AB57		
15750	Minor Road, alignment	roadCLineMember	#FBEE2D	13.00		Butt linecap, round linejoin	
15751	Minor Road, road name	textMember					
15760	Local Street, alignment	roadCLineMember					
15761	Local Street, road name	textMember					
15770	Alleyway, alignment	roadCLineMember					
15771	Alleyway, road name	textMember					
15780	Private Road, Public Access, alignment	roadCLineMember					
15781	Private Road, Public Access, road name	textMember					
15782	Private Road, Restricted, alignment	roadCLineMember					
15783	Private Road, Restricted, road name	textMember					
15790	Pedestrianised Street, alignment	roadCLineMember					
15791	Pedestrianised Street, road name	textMember					
15792	Road Tunnel	roadCLineMember					

Annexe A Glossary

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

air height
This is height derived from aerial photography

anchor point
Text attribution uses anchor points, see chapter 2 – Attribution.

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 descriptive code indicating what an entity represents or how it should be portrayed.

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

CAD
Computer-aided design.

cartography
The organisation and communication of geographically related information in either graphic or digital form. It can include all stages from data acquisition to presentation and use.

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

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 similar to an audio CD. Ordnance Survey uses the writable CD, a WORM (write once read many) device. The digital bits are encoded into a vegetable dye and, once written, cannot be erased by overwriting with subsequent data. A laser reads the disc.

coordinates
Pairs of numbers expressing horizontal distances along original axis. Alternatively, that triplet 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.

copyright
Copyright is a legal property right that enables the creator 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 how up to date data is.

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

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 that 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.

dataset
An Ordnance Survey term for a named collection of logically related features arranged in a prescribed manner, for example, all water features. A dataset has more internal structure than a layer and is related to another dataset only by position.

DfT
Department for Transport is the government department responsible for allocating road classifications.

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

edgematch
The process of ensuring that data along the adjacent edges of map sheets, or some other unit of storage, matches in both positional and attributes terms.

encryption
Using a set of either public or public/private keys to encrypt and decrypt data, it ensures that information is unreadable by anyone other than the intended recipient.

feature
An item of detail within a map that can be a point or symbol, a line or text.

feature class
A specific named record that 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 of the object surveyed, its representation on the map, or both.

feature description
A numeric attribute has a textual description that describes the feature in terms either of the object surveyed or its representation on the map (or both).

font
The style of text character used by a printer or plotter.

format
The specified arrangement of data, for example, the layout of a printed document, the arrangement of the parts of a computer instruction or 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.

GML
Geography Mark-up Language. An XML encoding for the transport and storage of geographic information, including both the geometry and attributes of geographic features.

Gzip
Gzip produces files with a .gz extension. *gunzip* can decompress files created by *gzip*, *compress* or *pack*. The detection of the input format is automatic.

height datum
Datum is a known position from which all height information is relatively measured. The heights expressed for points mapped on the National Grid are expressed as a height difference in meters from a known point on the harbour wall in Newlyn, Cornwall.

history
In the context of geospatial data, the storage of deleted features and superseded versions of features. This does not apply to local map vectors.

grid
The planimetric frame of reference, for example, the National Grid.

kilobyte (KB)
1 024 bytes; a measure of data storage capacity.

Licensed Partner
Any organisation that has entered into a formal licence agreement with Ordnance Survey to market map information or to incorporate map data with their application or service.

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 coordinates and may be curved or straight. Curved lines consist of a series of very short straight-line segments. Lines may be concurrent with other lines under certain conditions. As an object abstraction, a line has no width.

linear feature
Map feature in the form of a line, for example, road centre-lines that may or may not represent a real-world feature.

inner bounding polygon
These go in an anticlockwise (none in OS VectorMap Local).

map
The representation on a flat surface of all or part of the Earth's surface, intended to be communicated for a purpose or purposes, transforming relevant geographic data into an end-product that is visual, digital or tactile.

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

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, for example, 1:1250 or 1:50 000.

megabyte (MB)
1 048 576 bytes; a measure of data storage capacity.

name or text feature
The proper name or label of an object (real-world) or feature (object abstraction) consisting of one or more text strings. A name position is defined by a coordinate pair.

National Grid
A unique referencing system that can be applied to all Ordnance Survey maps of Great Britain at all scales. It is based on 100 km squares covering the whole of GB based on a Transverse Mercator projection. 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.

Normal tidal limit (NTL)
The point inland to which mean tides (or mean spring tides in Scotland) flow at high water. The point is shown and annotated by text.

OGC
The Open Geospatial Consortium, Inc (OGC) is a non-profit, international, voluntary consensus standards organisation that is leading the development of standards for geospatial and location-based services.

orientation
Orientation of a point or a text feature is measured in degrees anticlockwise from grid east.

orthometric height
The distance H along a line of force from a given point P at the physical surface of an object to the geoid.

OS MasterMap Topography Layer
A detailed, intelligent, geographic database. It contains almost half a billion features from the built and natural landscape of Great Britain.

outer bounding polygon
These go in an anticlockwise direction.

packing
Spaces used as fillers to complete a record or field.

pecked line
A line drawn as a series of dashes.

photogrammetric survey
Photogrammetric surveyors view 3-D aerial images by overlaying the images with existing detailed mapping data; they can detect where change has occurred and update the mapping data.

point
A zero-dimensional spatial abstraction of an object represented as a coordinate pair.

point feature
A zero-dimensional spatial abstraction of an object with its position defined by a coordinate list. Points are represented by nodes, which may be isolated or part of a link (terminating). Points may also be represented by symbols that 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 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) that identifies the polygon.

polygon boundary
The link or links that enclose a polygon, projected into the horizontal plane.

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

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

road casings
These are parallel lines that define roads alignments in the data.

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 will be 1 m but the accuracy may be ±5 m or worse.

rural survey sweep
The process by which revision is collected using aerial photography, the resulting 'sweep' is driven by change intelligence.

Scalable Vector Graphics (SVG)
SVG is a language for describing two-dimensional graphics and graphical applications in XML.

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

spaghetti data
Data that does not carry any explicit topological relationship information.

spot height
The geographic position of ground-surveyed spot heights are represented by 'Spot height position'.

text feature
A free-standing text string in the digital data describing a feature, or particular instance of a feature, for example, Factory or Acacia Avenue.

text height
The height at which a text string is intended to be plotted out at the nominal map scale. This information is included in the feature header of the text feature.

tile
Broadly synonymous with digital map file, it implies evenly-sized map sheet units.

topology
The study of the properties of a geometric figure that is not dependent on position, such as connectivity and the relationship between lines, nodes and polygons.

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.

W3C
World Wide Web Consortium (W3C) develops interoperable technologies (specifications, guidelines, software and tools) to lead the Web to its full potential. W3C is a forum for information, commerce, communication, and collective understanding.

XML
Extensible Mark-up Language provides a flexible way to create common information formats and shares both the format and the data on the Internet, Intranets and elsewhere. XML is extensible because, unlike HTML, the mark-up tags are unlimited and self-defining. XML is a simpler and easier to use subset of the Standard Generalised Mark-up Language (SGML), the standard for how to create a document structure.

XML schema
XML schemas express shared vocabularies; they provide a means for defining the structure, content and semantics of XML documents.