ORDNANCE SURVEY GB

MINISCALE – PRODUCT GUIDE

Ordnance Survey

Version History

Version	Date	Description
1.0	01/2009	Initial specification release
2.0	03/2018	Specification changes
3.0	21/12/2020	Specification changes

Purpose of this Document

This is the Product Guide for the MiniScale product. This Guide provides greater insight into this product and its potential applications. For information on the contents and structure of MiniScale, please refer to the Technical Specification.

The terms and conditions on which MiniScale is made available to you and your organisation are contained in that Ordnance Survey customer contract. Please ensure your organisation has signed a valid current customer contract to be able to use MiniScale. We may change the information in this Guide at any time, giving you the notice period set out in your contract. We do not accept responsibility for the content of any third party websites referenced or accessed in or through this Guide.

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1. Introduction

1.1 Overview

Ordnance Survey's MiniScale is a small-scale product designed for use within desktop graphic applications. It provides geographic context for the whole of Great Britain by showing major boundaries, lines of communication, settlements and physical features.

MiniScale is a vector graphic that has been created using desktop publishing software so that it can be customised and converted into a wide variety of graphic formats. Alternatively, the raster examples can also be used for web applications or within a geographical information system (GIS) as a backdrop.

MiniScale is aimed at any customer who requires a high-quality, visually appealing map for their documents and/or publications, whether that be a magazine, brochure or website.

An extract of MiniScale, with default layers and styles, is shown below.

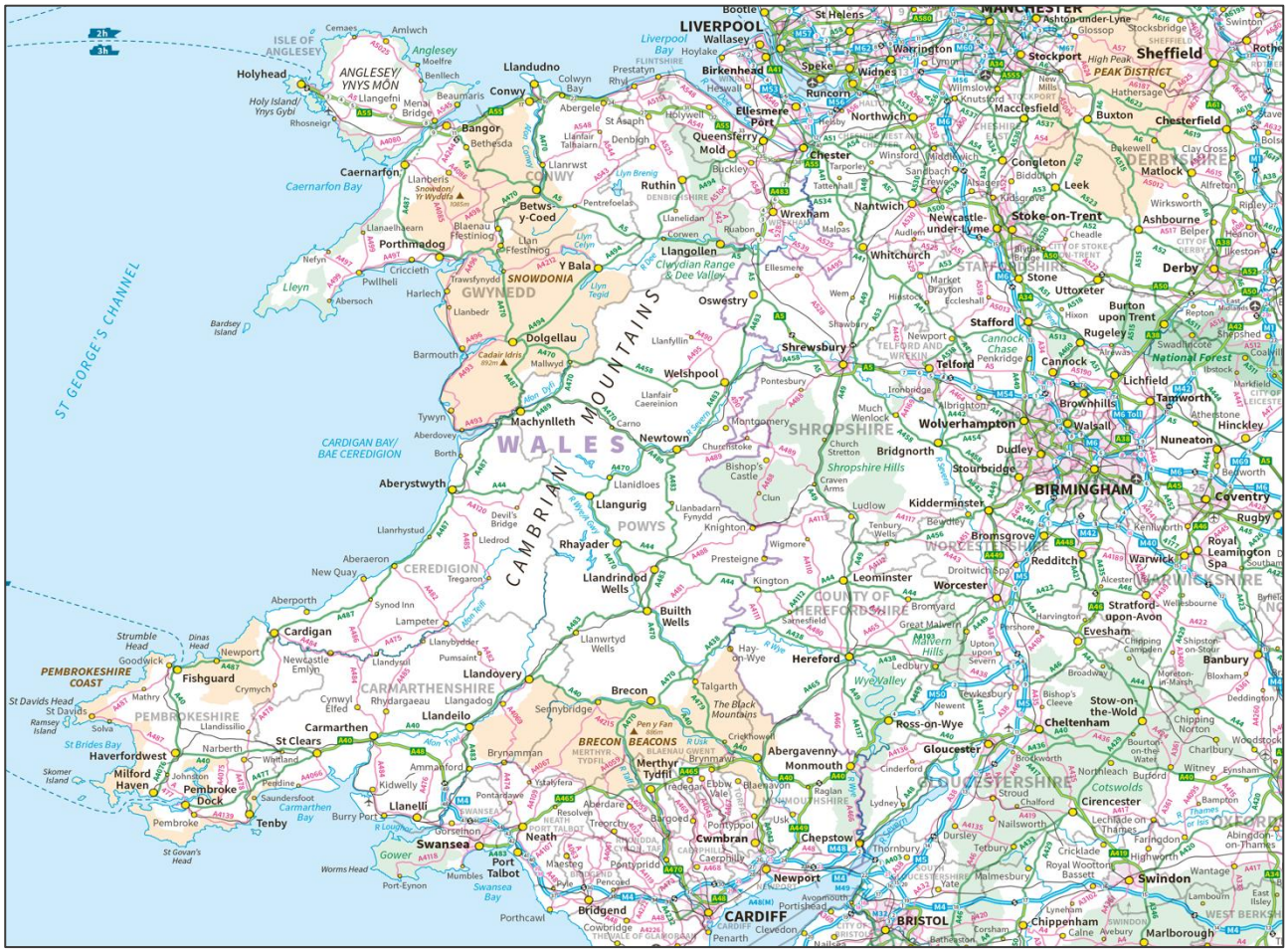


Figure 1: An extract of MiniScale showing default layers and styles.

1.2 Applications

Typical ways in which MiniScale could be used include:

- Creating location maps for websites or promotional material, for example, showing the locations of head offices or the distribution of assets across Great Britain.
- Facilitating high-level route planning along major roads and railways.
- Producing overview or entry screen maps within an Intranet or Internet web mapping service.

The smaller scale of MiniScale also lends itself to applications that need to show information at a regional or county/unitary level, where a larger-scale map would be too detailed or cluttered.

1.3 Supply and formats

The data is supplied as a download and is updated and released annually in January. It is supplied as the whole of Great Britain, with Orkney and the Shetland Islands shown in their correct positions. Some European coastline is supplied to give context.

MiniScale is supplied in the following formats (file sizes are approximate):

- Adobe Illustrator CC 2019 or higher; file size 30 Mb
- Editable Encapsulated PostScript (EPS); file size 95 Mb
- TIFF LZW compression; file size 15–40 Mb

The Illustrator file contains the layers and styles required to customise the product. This file also contains additional layers, such as sea depths, height colouring and other information that does not appear on the default style for MiniScale. Some of the ways that MiniScale can be customised are shown in the raster examples provided.

The Illustrator file requires the font 'Source Sans Pro', which is supplied in the download. This is a free open source font created by Adobe. It is available from Adobe and Font Squirrel: https://www.fontsquirrel.com/fonts/source-sans-pro.

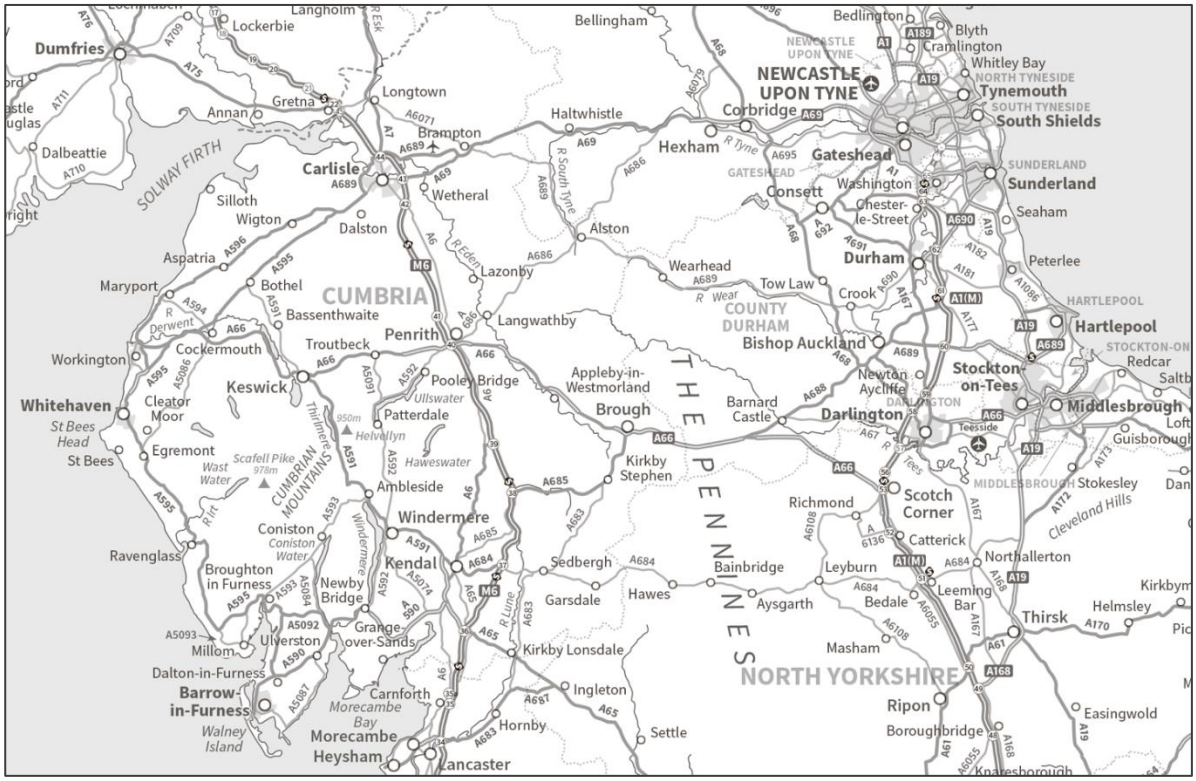


Figure 2: MiniScale monochrome example.

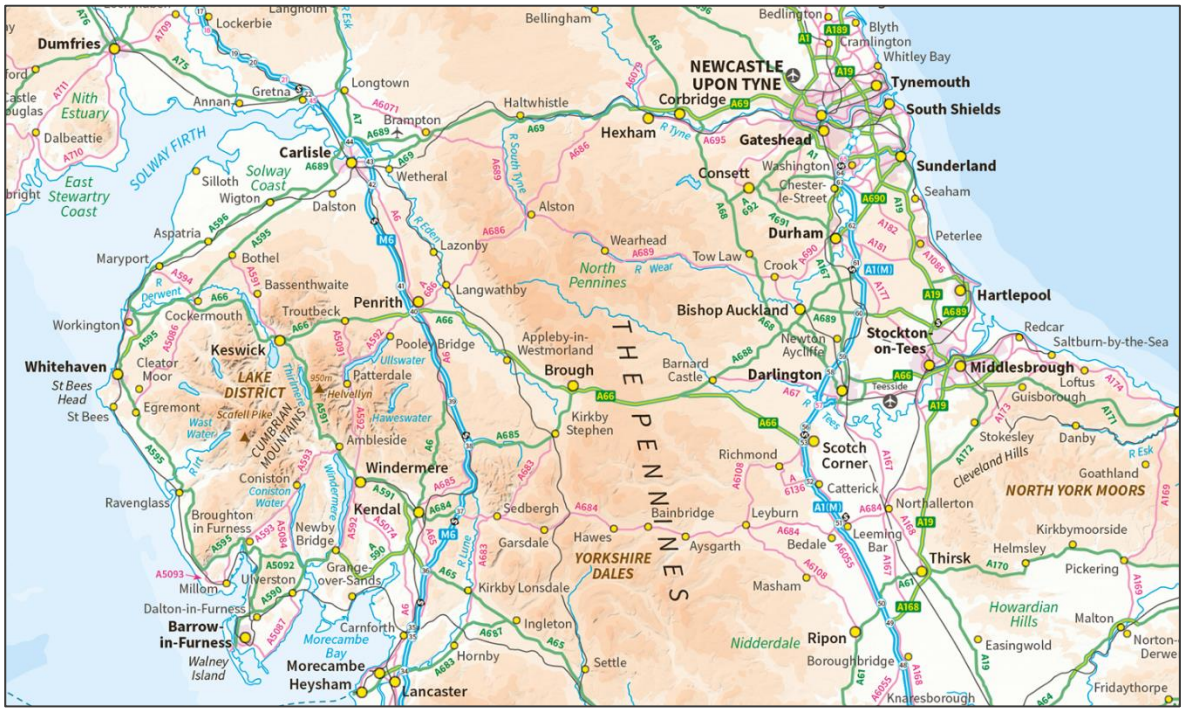


Figure 3: MiniScale with shaded relief (TIFF images available from supplementary file supplied).

2. MiniScale Overview

2.1 Scale

1:1,000,000 (1 mm = 1 km); MiniScale is designed to be used at viewing scales of between 1:700,000 and 1:2,000,000.

2.2 Coverage

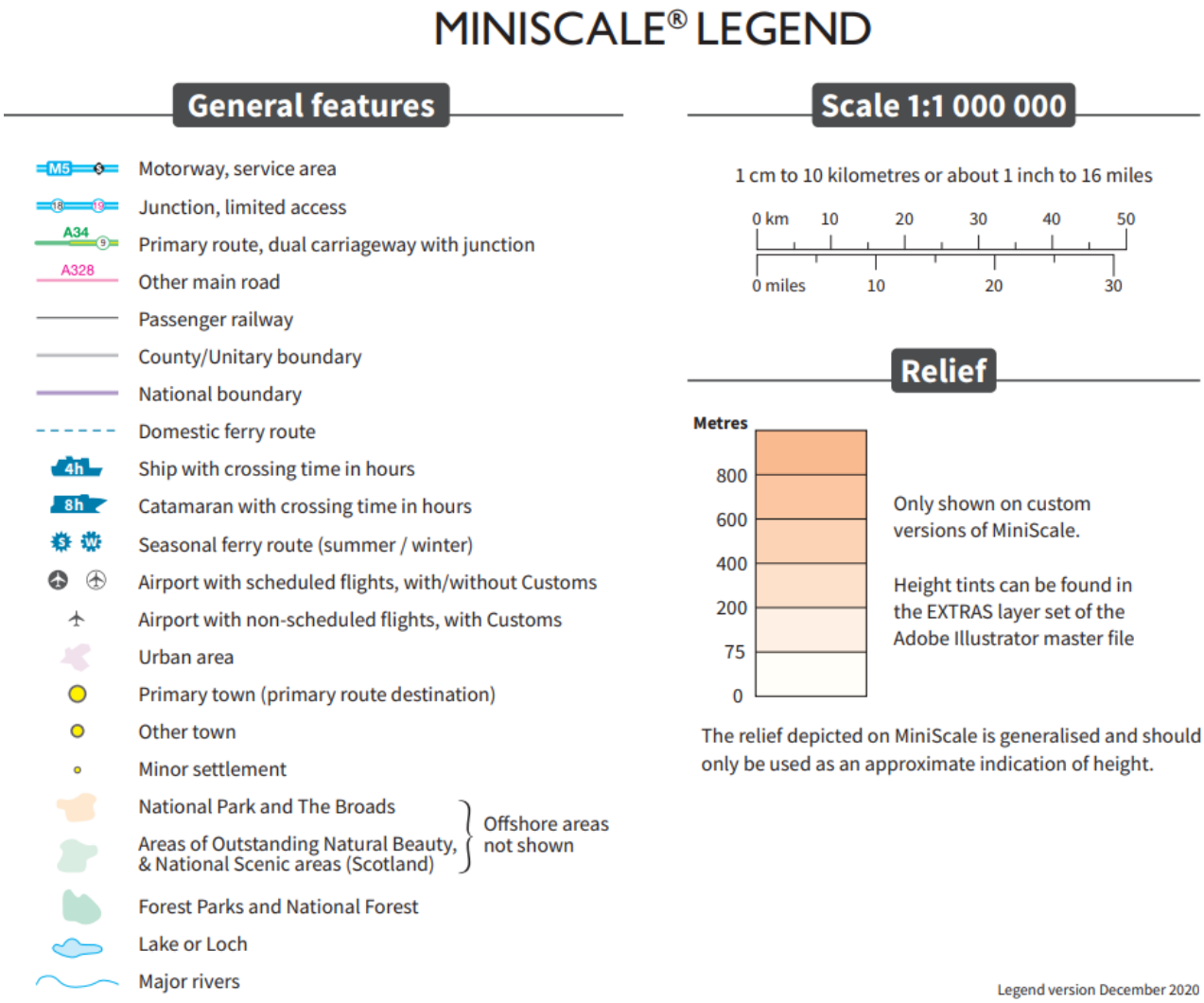
Great Britain.

2.3 Source of MiniScale

MiniScale is a generalised hand drawn map, with updates derived from the 1:250,000 scale topographical digital database.

2.4 Legend

The following legend is for the default standard look supplied in the Illustrator vector file.



2.5 Currency

MiniScale is a hand drawn map. This enables us to achieve the extreme simplification, generalisation and 'look' of MiniScale. The data is updated using the latest available version of Ordnance Survey's 1:250,000 scale topographical digital database as a guide.

2.6 Revision

The MiniScale master dataset is updated and released annually in January.

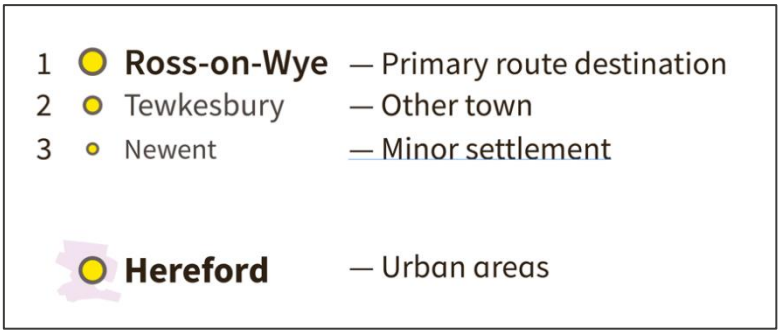
2.7 Depiction of roads and towns

MiniScale shows three classes of roads: A-Road with primary/non-primary styles and Motorway.

The primary (green) roads are the recommended through routes that complement the motorway system. Where there are significant lengths of dual carriageway, they have been shown with a dual carriageway

style. The primary roads link primary route destination towns, which appear on green road signs. In congested urban areas, some roads have been omitted for clarity.

MiniScale settlements are shown in three levels: Primary route destination towns (large dot), other towns useful to the map (medium dot) and minor settlements (small dot).



Urban names have been given a range of point sizes and weights to visually differentiate them. No statistical relevance, such as size or population, should be inferred from this. Primary route destination names are all the same regardless of their physical size: thus, the hamlet of Scotch Corner appears the same on the map as a major town like Andover as these two settlements are both primary route destinations. Due to space issues, many suburban localities will be missing around major cities. The choice of which minor names we have space to show are weighted in favour of those that give context to the road network.

2.8 Welsh spellings

At the scale used for MiniScale it is impractical to show all the Welsh names with dual spellings (English and Welsh). However, the Illustrator file contains an extra layer of Welsh names that can be used to replace the English ones; this requires manual intervention since the Welsh names are in the same position as the English names.

2.9 Shaded relief file

Raster examples of MiniScale with shaded relief are provided to show what can be achieved with the Illustrator files. The relief file is embedded with individual 100 km shaded relief images fitted to the National Grid. These can be added to the main MiniScale map by using Illustrator's 'Paste in front' option. Use the 'multiply' setting to control the transparency and strength of the shaded relief.

2.10 Resolution

The resolution of the master vector Illustrator file is only limited by the output device.

The example raster files are at a resolution of 10 dots per mm (dpmm) or 254 dots per inch (dpi), and a pixel equates to 100 metres on the ground. This resolution maintains the necessary clarity of text for on-screen use but is not considered suitable for high-quality printing.

2.11 Georeferencing

To be able to view each tile in correct geographic relation to the National Grid and to each other, the tiles must be georeferenced. GIS typically provide georeferencing as part of their functionality, but for each set of tiles it is necessary to provide the information on how the tiles should be ordered. MiniScale TIFF tiles are in COG (Cloud Optimised GeoTIFF) format, which enables georeferencing information to be embedded within a TIFF file itself.

The Adobe Illustrator file is georeferenced using Avenza MapPublisher. This plugin provides GIS tools for Illustrator and unlocks additional attributes embedded in the MiniScale vector file. It is not a requirement for using the vector file for graphic output, but it does open up new ways of using MiniScale for those that do have the plugin.

2.12 Data compression

TIFF data volumes are influenced by the level of data compression.

Approximate storage volumes: 16–80 Mb using LZW compression.

2.13 Image compression

When an image is compressed, duplicated data that has no value is removed or saved in a shorter form, reducing the file's size. For example, if large areas of water are the same tone, only the value for one pixel needs to be saved, together with the locations of the other pixels with the same colour. When the image is edited or displayed, the compression process is reversed. When a raster is compressed, not only are the data volumes reduced, but the user can download, display, edit and transfer images more quickly.

There are two forms of compression: lossless and lossy.

2.13.1 Lossless compression

As its name suggests, lossless compression does not lose information within an image. A lossless compression retains the original quality of an image when it is uncompressed. This process does not provide much compression, so file sizes remain large. Lossless compression is used mainly where detail is important, such as when users are planning to make large prints.

2.13.2 Lossy compression

This process degrades images to some degree, meaning that the decompressed image is not quite the same as the original. The more an image is compressed, the more degraded it becomes. In many situations, such as posting images on the Internet or printing small- to medium-sized prints, the image degradation is not so obvious. If a lossy compressed image is over enlarged, the degradation will become apparent.

2.14 TIFF

TIFF is one of the most commonly used lossless image formats. TIFF is primarily designed for raster data interchange and is supported by numerous image-processing applications. This permits much more efficient access to very large files that have been compressed.

2.15 Managing MiniScale files

MiniScale has been created as a vector data graphic map that is favourable for use within desktop graphic applications. MiniScale's use within GIS will be limited to backdrop mapping when using the TIFF only.

MiniScale is supplied as a single download with a variety of industry-standard formats. The Illustrator vector data is held in layers, with styled objects for easy customisation of map images. These can be easily converted to web images using appropriate software (not supplied).

3. Features, layers and styles

Graphic styles and Illustrator symbols are used in MiniScale to achieve the final look of the map and to aid in restyling the vector data. Some finishes are achieved using layer effects provided by Illustrator. For example, the boundaries layer setting applies an overall 'multiply' effect; if each of the boundary line paths were individually set to multiply, the result would not work. Illustrator users should be aware that the layer effect is lost if the contents of such layers are copied to a new document. In Table 1, the * symbol indicates layers that have a layer effect applied.

Table 1: Features, layers and styles in MiniScale.

Features	Layer description	Style and content notes
Names	National	For example, England, Wales and Scotland
	County	For example, Devon, Hampshire and so on
	Unitary	Names shown in pale grey CAPS
	Urban Primary	Primary destination towns with a large urban extent
	Primary Town	Primary destination towns
	Other Town	Other towns
	Minor Town	Selected towns and villages useful to MiniScale
	Bridge/Airport	Named when name is different to that of the associated town, for example, Heathrow
	Islands	Selected names, for example, Isle of Skye
	Physical	Selected names, for example, Land's End, Pennines and so on

Features	Layer description	Style and content notes
	Parks & Areas of Outstanding Natural Beauty (AONB)	For example, Cotswold, Gower and so on
	Coastal Water	Selected names, for example, Poole Bay
	Inland Water	Selected names, for example, Loch Lomond
	Rd Numbers – Motorway	Numbered where space permits
	Rd Numbers – Primary	Numbered where space permits
	Rd Numbers – Other A-Rd	Numbered where space permits
	Rd Numbers – Junctions	Access shown by colour (full=black / limited=pink)
Admin Boundaries	National Bdys*	Purple line
	County/Unitary Bdys*	Light grey line
Communications	Symbols – Mountains	Selected, for example, Ben Nevis
	Symbols – Airports	Symbol (with or without customs). Large Airports named when name is different to that of the associated town.
	Symbols – Urban Primary	Primary destination towns with a large urban extent
	Symbols – Primary	Large-sized yellow dot with black ring
	Symbols – Other Town	Medium-sized yellow dot with black ring
	Symbols – Minor Town	Small-sized yellow dot with black ring
	Symbols – Services	24 hr services
	Symbols – Junctions	Blue ringed white circle
	Ferry – Routes	Time of crossing shown where space permits
	Rail – Channel Tunnel	Black pecked line
	Rail – Main Network	Passenger routes only (main and other). Solid black line.
	Rail – Main Network HO*	Pale black
	Roads – Motorway*	Solid blue line with white centre line
	Roads – Primary A-Rd*	Green lines. Sublayers for single and dual carriageways.
	Roads – Other A-Rd	Pink line (dense urban areas may show only a selection)
	Roads – Under Construction	Only significant projects shown

Features	Layer description	Style and content notes
Water	Water – Holdouts	Pale blue
	Water – Coastline	High water mark only
	Water – Lakes/Locks	Selection of major ones only
	Water – Main Rivers	Selection of major ones only, for example, Thames, Severn, Trent, Dee and so on
Area Fills	Area – Urban	Pale purple tint
	Area – Forest Parks	Green fill and named, for example, New Forest
	Area – National Parks	Beige fill and named, for example, Dartmoor
	Area – AONB & NSA	Green fill and named, for example, Gower
Base Fills	Land – England	White (polygons are named in their attributes)
	Land – Scotland	White (polygons are named in their attributes)
	Land – Wales	White (polygons are named in their attributes)
	Land – Isle of Man	White
	Land – International	White
	Sea	Light blue fill
Extras	Grid – 100k Squares	100 km grid and reference letters
	Grid – 10k	10 km grid and reference letters/numbers
	Grid – Long & Lat	Great Britain
	Names – Alternative Spelling	Welsh and Gaelic alternative spellings of names
	Bdy Lines – London	London boroughs
	Contours	Height tint (with layers for 75, 200, 400, 600 and 800+ metres)
	Sea Depths	Depth tint (with layers for 60, 120, 300 and 600+ ft)

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