ORDNANCE SURVEY GB

OS MASTERMAP TOPOGRAPHY LAYER™ – STANDARD STYLING SPECIFICATION

OFFICIAL
Ver 2.0

Version history

Version	Date	Description
1.0	08/2017	Initial version named *Cartographic Styling Guidance*.
2.0	02/2023	Changed document name to *Standard Styling Specification*. Updated and edited document content and structure.

Purpose of this document

This document provides information on the Standard Styling Specification for the OS MasterMap Topography Layer product. For related styling information, please refer to the OS MasterMap Topography Layer – Styling Getting Started Guide and Ordnance Survey OSMM-Topography-Layer-stylesheets GitHub repository that includes SQL scripts and cartographic stylesheets. For more information on the contents and structure of OS MasterMap Topography Layer, please refer to the Overview, Technical Specification and Getting Started Guide.

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Contents

1. Standard Styling Specification

Ordnance Survey has produced a Standard Styling Specification for OS MasterMap. This is a distinct set of fonts, colours, fill styles and symbols. The specification was developed using a combination of three descriptive attributes: descriptive group, descriptive term and make.

Providing a styling specification has allowed many software providers to develop their own styling (based and adapted from this specification) that can be applied when the data is initially translated so that the data can be displayed immediately with a coherent style.

This section of the specification relates to the product both before and after the descriptive terms upgrade in 2016.

1.1 Styling using a single attribute

Most geographic information systems (GIS) contain tools that allow customers to choose to make their data display in any preferred manner. Customers can apply their own colours, styles and symbols based on the same three attributes. Alternatively, they can use any of the attributes, either in isolation or in tandem (if their GIS permits), to render the data to their own specification. Attaining a coherent style depends on choosing the attributes carefully. There is little point in using the TOID, for example, as each feature would then need its own colour. You can, however, use the TOID version number to get an idea of how much change has occurred in one area compared to another. In the example below, the darker the red, the higher the version number, and therefore the greater the amount of surveyed change.

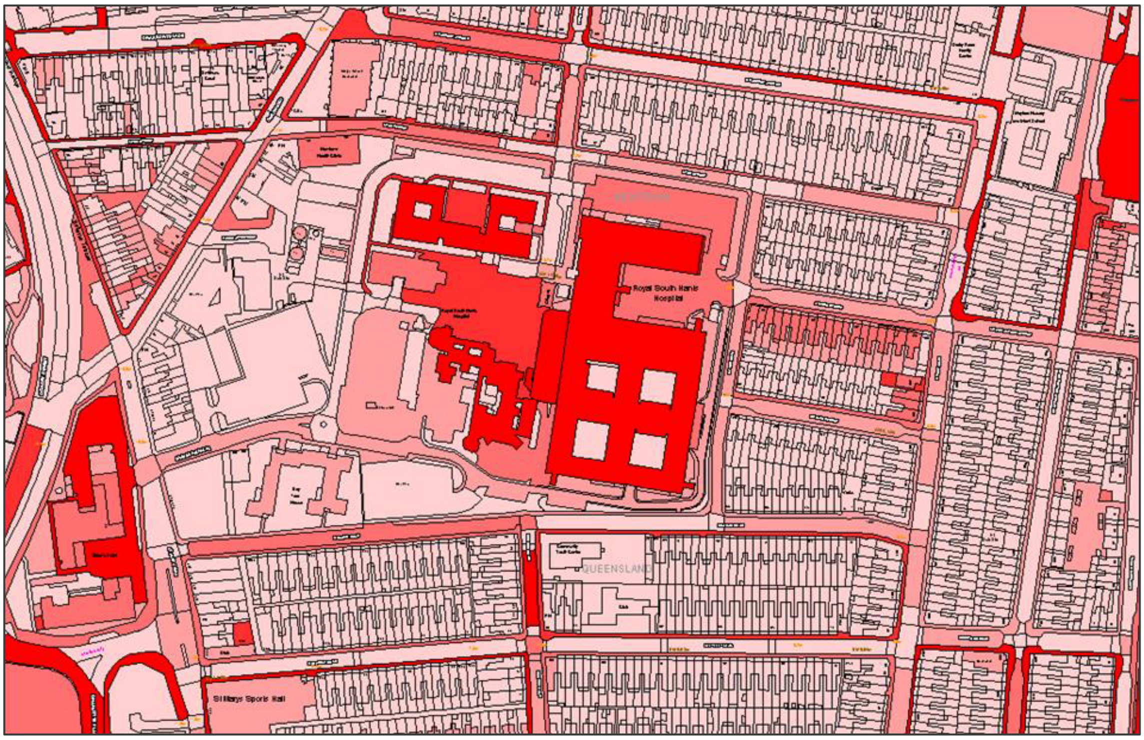


Figure 1: Example map displaying varying shades of red to visualise the amount of change over time.

This example displays the areas where the greatest amount of change is occurring in the landscape. Having so many attributes allows this to be done without any additional work on the data itself. If a customer's own attributes are added to OS MasterMap Topography Layer, these can also be used as the basis for the styling.

1.2 Using OS MasterMap Topography Layer with other data

Having such flexibility to customise the data presents an opportunity to derive additional value from OS MasterMap Topography Layer. For example, where there is a necessity to have a clear display of what features look like from a real-world point of view, styling schemes based on this style specification work well. If customers need to view their own data alongside OS MasterMap Topography Layer, they could consider toning down or removing colour from the features so that their data is more contrasted, and therefore has bigger visual impact.

In the example below, a customer has derived a set of grassed areas, coloured and hatched in green, which is displayed over OS MasterMap Topography Layer, with only the buildings highlighted in grey to give some additional definition to the data and to help viewers of the data orientate themselves within the landscape.

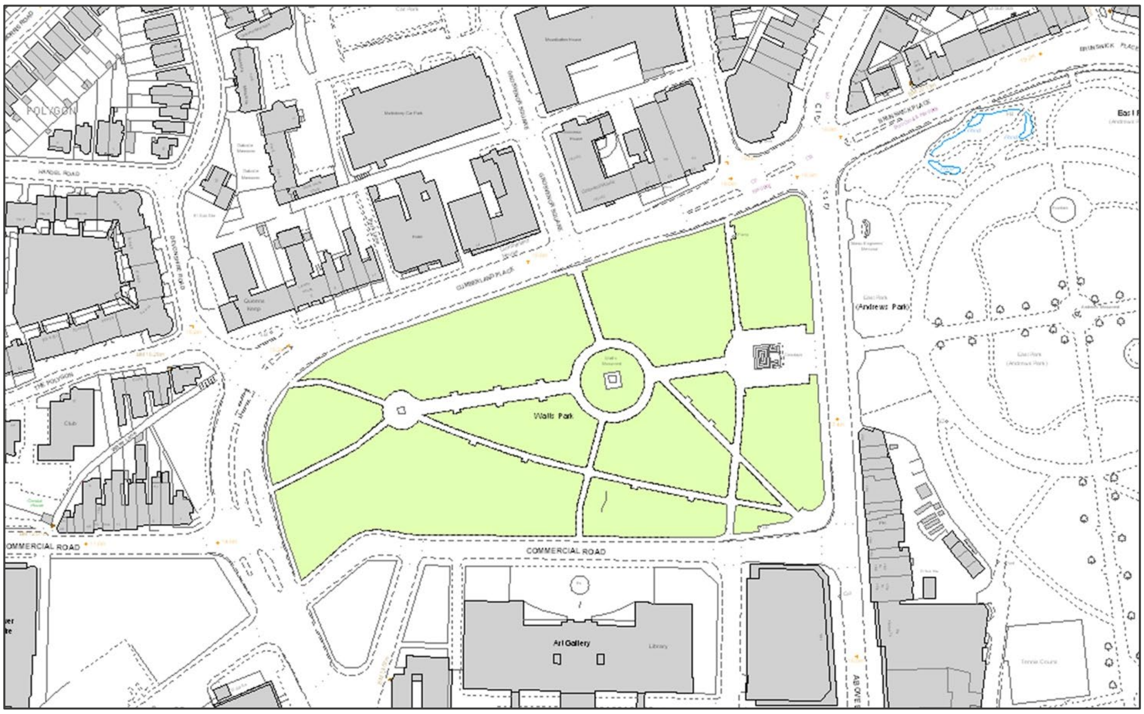


Figure 2: Example map displaying grassed areas in green over OS MasterMap Topography Layer with buildings highlighted in grey.

The customer's own data catches the eye first and is the focus of attention. Some systems allow different views of the data, so that one type of styling can be seen by one set of viewers and an entirely different type by another.

1.3 Styling on certain features

OS MasterMap Topography Layer may also be styled just by the line or point features to replicate the engineering style of drawing commonly used in computer-aided design (CAD) systems. The data can even be rendered in black and white to save on printer ink if the printed map is going through various drafts before a final full colour version is produced, or for use in presentations and documents that are only going to be printed in black and white.

1.4 Summary

In this section, we have discussed how, by adapting the flexibility of OS MasterMap Topography Layer in terms of how it can be displayed, customers can:

- Visualise the attributes in thematic maps and derive information from maps in a visual way.
- Customise maps to best suit their purpose.
- Produce clear, high-quality maps for use in documents, presentations or as hard copies for when it is not possible to access the data through a screen.

2. Cartographic styling

This section provides a guide to applying the styles, defined in Section 3 – Cartographic style definitions to Topography Layer features.

Note: As landform features and pylons sit on top of topographic areas, they need to be above these in the draw order to be visible.

Styles are not provided for every feature; this means that some features are not drawn when the default styling is applied. This may be for one of several reasons for this, including:

- The information is already rendered by another feature.
- The information is not easily positioned or styled.
- If drawn, the information would be cluttered or confusing.
- The information is structural in the data but adds little value for the user by its cartographic depiction.

Note: The information in this section has not been updated to reflect the Descriptive Terms update. Please refer to Addendum A: Cartographic styling for new descriptive terms for the updated terms.

2.1 TopographicArea

2.1.1 Mapping table (no or single *descriptiveTerm*)

Table 1: TopographicArea mapping table (no or single descriptiveTerm).

descriptiveGroup	descriptiveTerm	make	Style name
Building		Manmade	buildingFill
Building	Archway	Manmade	buildingFill
General Surface		Manmade	madeSurfaceFill
General Surface		Multiple	multipleSurfaceFill
General Surface		Natural	naturalSurfaceFill
General Surface		Unknown	madeSurfaceFill
General Surface	Multi Surface	Multiple	multipleSurfaceFill
General Surface	Step	Manmade	stepFill
Glasshouse		Manmade	glasshouseFill
Inland Water		Natural	inlandWaterFill
Landform		Manmade	manmadeLandformPattern
Landform		Natural	naturalLandformPattern
Landform	Cliff	Natural	naturalLandformPattern

descriptiveGroup	descriptiveTerm	make	Style name
Landform	Slope	Manmade	manmadeLandformPattern
Natural Environment	Boulders	Natural	naturalEnvironmentFill and bouldersPattern
Natural Environment	Boulders (Scattered)	Natural	naturalEnvironmentFill and scatteredBouldersPattern
Natural Environment	Coniferous Trees	Natural	naturalEnvironmentFill and coniferousTreesPattern
Natural Environment	Coniferous Trees (Scattered)	Natural	naturalEnvironmentFill and scatteredConiferousTreesPattern
Natural Environment	Coppice Or Osiers	Natural	naturalEnvironmentFill and coppicePattern
Natural Environment	Heath	Natural	naturalEnvironmentFill and heathPattern
Natural Environment	Marsh Reeds Or Saltmarsh	Natural	naturalEnvironmentFill and marshPattern
Natural Environment	Nonconiferous Trees	Natural	naturalEnvironmentFill and nonconiferousTreesPattern
Natural Environment	Nonconiferous Trees (Scattered)	Natural	naturalEnvironmentFill and scatteredNonconiferousTreesPattern
Natural Environment	Orchard	Natural	naturalEnvironmentFill and orchardPattern
Natural Environment	Rock	Natural	naturalEnvironmentFill and rocksPattern
Natural Environment	Rock (Scattered)	Natural	naturalEnvironmentFill and scatteredRocksPattern
Natural Environment	Rough Grassland	Natural	naturalEnvironmentFill and roughGrassPattern
Natural Environment	Scree	Natural	naturalEnvironmentFill and screePattern
Natural Environment	Scrub	Natural	naturalEnvironmentFill and scrubPattern
Path		Manmade	pathFill
Path	Step	Manmade	stepFill
Rail		Manmade	railFill
Rail		Unknown	madeSurfaceFill
Rail		Natural	naturalSurfaceFill
Road Or Track		Manmade	roadFill

descriptiveGroup	descriptiveTerm	make	Style name
Road Or Track	Traffic Calming	Manmade	roadFill
Roadside		Manmade	madeSurfaceFill
Roadside		Unknown	madeSurfaceFill
Roadside		Natural	naturalSurfaceFill
Structure			structureFill
Structure		Manmade	structureFill
Structure	Overhead Construction	Manmade	structureFill
Structure	Pylon	Manmade	structureFill
Structure	Upper Level Of Communication	Manmade	structureFill
Tidal Water		Natural	tidalWaterFill
Tidal Water	Foreshore	Natural	tidalWaterFill and foreshorePattern

2.1.2 Property application logic (no or single descriptiveTerm)

This section defines the overall logic for applying the style. The order of the property in the condition list below is the order that it is applied; once applied the condition loop is exited.

This example below shows the notation for filtering using the *descriptiveGroup* and *descriptiveTerm* attributes; features with multiple *descriptiveTerm* attributes are discussed in the next section.

Table 2: TopographicArea property application logic (no or single descriptiveTerm) example.

if	***descriptiveGroup not 'Landform'***	***and***
	descriptiveTerm not 'Pylon'	***then apply***

Table 3: TopographicArea property application logic (no or single descriptiveTerm).

if	descriptiveGroup = 'Building'	then apply	buildingFill
or	descriptiveTerm = 'Step'	then apply	stepFill
or	descriptiveGroup = 'Glasshouse'	then apply	glasshouseFill
or	descriptiveGroup = 'Historic Interest'	then apply	heritageFill
or	descriptiveGroup = 'Inland Water'	then apply	inlandWaterFill
or	descriptiveGroup = 'Natural Environment'	then apply	naturalEnvironmentFill
or	descriptiveGroup = 'Path'	then apply	pathFill
or	descriptiveGroup = 'Road Or Track'	then apply	roadFill
or	descriptiveGroup = 'Structure'	then apply	structureFill

or	descriptiveGroup = 'Tidal Water'	then apply	tidalWaterFill
or	descriptiveGroup = 'Unclassified'	then apply	unclassifiedFill
or	descriptiveGroup = 'Rail' and make = 'Manmade'	then apply	railFill
or	make = 'Manmade'	then apply	madeSurfaceFill
or	make = 'Natural'	then apply	naturalSurfaceFill
or	make = 'Unknown'	then apply	madeSurfaceFill
or	make = 'Multiple'	then apply	multipleSurfaceFill
else		apply	unclassifiedFill

2.1.3 Property application logic (multiple descriptiveTerm)

This section deals with the techniques for styling features with the *descriptiveGroup* value of "Natural Environment" that have multiple *descriptiveTerm* attributes. This section only provides a selection of combinations that were prominent in a study of *descriptiveTerm* occurrences on natural environment features. The patterns and symbols used are all defined in the pattern definitions section. The logic to apply is as follows:

Table 4: Property application logic (multiple descriptiveTerm) example.

if	***descriptiveGroup = 'Natural Environment'***	***then***

Table 5: Property application logic (multiple descriptiveTerm).

If	Number of descriptiveTerm attributes = 3	then apply	relevant pattern for type combinations (see Pattern definitions)
or	Number of descriptiveTerm attributes = 2	then apply	relevant pattern for type combinations (see Pattern definitions)
or	Number of descriptiveTerm attributes = 1	then apply	relevant pattern for type
else		apply	multiVegetationPattern (see Pattern definitions)

2.2 TopographicLine and BoundaryLine

2.2.1 Mapping table

Table 6: TopographicLine and BoundaryLine mapping table.

descriptiveGroup	descriptiveTerm	physicalPresence	make	Style name
Building	Outline	Obstructing	Manmade	buildingLine
Building	Outline	Overhead	Manmade	buildingOverheadLine
Building	Division	Obstructing	Manmade	buildingLine
General Feature		Obstructing		defaultLine
General Feature	Overhead Construction			structureOverheadLine
General Feature		Edge/Limit		defaultDashedLine
General Feature		Minor Detail		defaultLine
General Feature	Tunnel Edge	Edge/Limit		defaultUndergroundLine
General Surface		Edge/Limit	Natural	defaultDashedLine
General Surface	Step	Edge/Limit	Manmade	defaultLine
General Surface	Step		Manmade	defaultLine
Historic Interest	Course Of Heritage			defaultUndergroundLine
Historic Interest		Minor Detail		defaultLine
Inland Water	Tunnel Edge	Edge/Limit		defaultUndergroundLine
Inland Water		Minor Detail	Manmade	waterLine
Inland Water	Culvert		Manmade	waterLine
Inland Water		Edge/Limit		waterLine
Landform	Top Of Slope	Edge/Limit	Manmade	landformBoldLine
Landform		Edge/Limit	Natural	landformLine
Landform		Edge/Limit	Manmade	landformLine
Landform	Bottom Of Cliff	Edge/Limit	Natural	landformLine
Landform	Ridge Or Rock Line		Natural	landformLine
Landform	Top Of Cliff	Edge/Limit	Natural	landformBoldLine
Landform	Bottom Of Slope	Edge/Limit	Manmade	landformLine
Network Or Polygon Closing Geometry	Inferred Property Closing Link	Closing		closingLine

descriptiveGroup	descriptiveTerm	physicalPresence	make	Style name
Network Or Polygon Closing Geometry	Polygon Closing Link	Closing		closingLine
Path	Tunnel Edge	Edge/Limit	Manmade	defaultUndergroundLine
Political Or Administrative	District	Boundary		districtLine
Political Or Administrative	Electoral	Boundary		electoralLine
Political Or Administrative	Parliamentary	Boundary		parliamentaryLine
Political Or Administrative	County	Boundary		countyLine
Political Or Administrative	Parish	Boundary		parishLine
Rail	Narrow Gauge	Network		narrowGaugeRailwayAlignmentLine
Rail	Standard Gauge Track			standardGaugeRailLine
Rail	Buffer		Manmade	defaultLine
Rail		Minor Detail		defaultLine
Rail	Tunnel Edge	Edge/Limit		defaultUndergroundLine
Road Or Track	Tunnel Edge	Edge/Limit	Manmade	defaultUndergroundLine
Road Or Track	Public	Edge/Limit	Manmade	defaultDashedLine
Road Or Track	Traffic Calming	Edge/Limit	Manmade	defaultDashedLine
Roadside		Minor Detail		defaultLine
Structure		Minor Detail	Manmade	defaultLine
Structure	Pylon	Edge/Limit	Manmade	defaultLine
Tidal Water	Mean High Water (Springs)	Edge/Limit	Natural	waterBoldLine
Tidal Water	Mean Low Water (Springs)	Edge/Limit	Natural	waterDashedLine

2.2.2 Property application logic

This section defines the overall logic for applying the style. The order of the property in the condition list below is the order that it is applied; once applied the condition loop is exited.

Table 7: TopographicLine and BoundaryLine property application table.

If	descriptiveGroup = 'Building' and physicalPresence = 'Overhead'	then apply	buildingOverheadLine
or	descriptiveTerm = 'Overhead Construction'	then apply	structureOverheadLine
or	descriptiveTerm = 'Tunnel Edge'	then apply	defaultUndergroundLine
or	descriptiveGroup = 'Building'	then apply	buildingLine
or	descriptiveTerm = 'Mean High Water (Springs)'	then apply	waterBoldLine
or	descriptiveTerm = 'Mean Low Water (Springs)'	then apply	waterDashedLine
or	descriptiveGroup = 'Inland Water'	then apply	waterLine
or	descriptiveTerm = 'Narrow Gauge'	then apply	narrowGaugeRailwayAlignmentLine
or	descriptiveTerm = 'Standard Gauge Track'	then apply	standardGaugeRailLine
or	descriptiveGroup = 'Landform' and descriptiveTerm = 'Top Of Slope'	then apply	landformBoldLine
or	descriptiveGroup = 'Landform' and descriptiveTerm = 'Top Of Cliff'	then apply	landformBoldLine
or	descriptiveGroup = 'Landform' and descriptiveTerm = 'Bottom Of Slope'	then apply	landformLine
or	descriptiveGroup = 'Landform' and descriptiveTerm = 'Bottom Of Cliff'	then apply	landformLine
or	descriptiveTerm = 'Parish'	then apply	parishLine
or	descriptiveTerm = 'Electoral'	then apply	electoralLine
or	descriptiveTerm = 'County'	then apply	countyLine
or	descriptiveTerm = 'Parliamentary'	then apply	parliamentaryLine
or	descriptiveTerm = 'District'	then apply	districtLine
or	physicalPresence = 'Edge/Limit'	then apply	defaultDashedLine
or	physicalPresence = 'Closing'	then apply	closingLine
Else		apply	defaultLine

2.3 TopographicPoint

Table 8: TopographicPoint mapping table.

descriptiveGroup	descriptiveTerm	make	Style name
General Feature	Positioned Nonconiferous Tree	Natural	positionedNonconiferousTreeSymbol
General Feature	Positioned Coniferous Tree	Natural	positionedConiferousTreeSymbol
General Feature	Positioned Boulder	Natural	positionedBoulderSymbol
Historic Interest	Site Of Heritage		heritageSiteOfSymbol
Historic Interest	Structure		pointSymbol
Inland Water		Manmade	waterPointSymbol
Landform		Manmade	pointSymbol
Landform	Disused Feature	Natural	landformDisusedSymbol
Landform		Natural	pointSymbol
Political Or Administrative	Boundary Post Or Stone		boundaryPostSymbol
Rail	Structure		pointSymbol
Roadside			pointSymbol
Structure		Manmade	pointSymbol
Structure	Structure	Manmade	pointSymbol
Structure	Triangulation Point Or Pillar	Manmade	triangulationStationSymbol
Terrain And Height	Spot Height		spotHeightSymbol
Tidal Water			waterPointSymbol

2.4 CartographicText

Table 9: CartographicText mapping table.

descriptiveGroup	descriptiveTerm	Style hex value	Font style
Buildings Or Structure		000000	Normal
Built Environment	Compound	000000	Normal
General Feature		000000	Normal
General Surface		000000	Normal
Height Control	Bench Mark	000000	Normal
Historic Interest		000000	Italic
Inland Water		0099FF	Normal
Landform		000000	Normal
Political Or Administrative		FF00FF	Normal
Rail		000000	Normal
Road Or Track	Road Name Or Classification	000000	Normal
Roadside		000000	Normal
Structure		000000	Normal
Terrain And Height		000000	Normal
Tidal Water	Foreshore	0099FF	Normal
Tidal Water		0099FF	Normal

2.5 CartographicSymbol

Table 10: CartographicSymbol mapping table.

descriptiveGroup	descriptiveTerm	Style (from style guide)
Height Control	Bench Mark	benchMarkSymbol
Inland Water	Culvert	culvertSymbol
Inland Water	Direction Of Flow	flowArrowSymbol
Political Or Administrative	Boundary Half Mereing	boundaryMereingChangeSymbol
Road Or Track	Road Related Flow	roadFlowSymbol
Rail	Switch	railwaySwitchSymbol

3. Cartographic style definitions

This section defines the default styles for the presentation of data within OS MasterMap. This specifies the colours, fonts, symbols and line styles used for visual display and printing of OS MasterMap. The styles are defined using Scalable Vector Graphics (SVG) syntax.

See W3C SVG Working Group (https://www.w3.org/Graphics/SVG/) for information on SVG. The Cartographic styling section provides the required information to apply the styles of this section to features.

3.1 Style principles

These definitions cover data supplied to customers as part of OS MasterMap by Ordnance Survey.

A style is not provided for all of the information in OS MasterMap due to limitations of generic styling and cartographic information available for specific feature types.

3.1.1 Use of coordinates, stroke-widths and text sizes

All coordinates in this section are specified in eastings and northings in units of metres in the British National Grid.

Stroke widths and text sizes are also specified in units of metres on the ground.

3.1.2 Colour palette

Ordnance Survey has chosen to use colours that are consistent in the internet environment. The colours used are defined with both their RGB and hexadecimal values in the colour palette.

3.1.3 Text

The fonts selected by Ordnance Survey to display text are those that are commonly used with web browsers. A brief description as to how a font is used in SVG is given in the Fonts section.

3.1.4 Symbols

There are two different uses of symbols as defined in the following sections. A base symbol set is defined in Shared symbol geometry section; these may be aggregated to form compound symbols as defined in Compound symbols. Patterns formed from repeating symbols on a predefined grid are specified in Pattern definitions.

3.1.5 Point symbols

Point symbols are used to represent the position of particular features within the data, such as a telephone call box or bollard. The symbol represents the location and type of feature.

Point symbols are applied to the visual representation by translating them to the location of the feature they are representing and rotating them, if the orientation attribute is present, by a given amount.

3.1.6 Fill symbols

Fill symbols are used to represent some attribution of a polygon feature and are distributed as a pattern fill across the polygon. For example, the symbol may represent information about the topographic surface such as the vegetation type.

Because of the overheads of applying pattern fills in many current software systems, pattern fills are optional and depend on user requirements and system capabilities. For example, if a user does not require each mixed vegetation type to be identified graphically, the multiVegetationPattern (as defined in Pattern definitions) could be used to represent all mixed vegetation features.

3.1.7 Line styles

Line styles are used to allow a user to distinguish between different types of linear feature, for example, distinctions may be made to emphasise:

- Obstructing detail
- Non-obstructing detail
- Underground detail
- Overhead detail
- Building outlines
- Water limits and linear features
- Landform detail
- Narrow-gauge railways
- Statutory boundaries
- Polygon-closing features

Some lines, particularly those representing the road network, are drawn twice, using first a background style and then an overlay to achieve a multicoloured result. Styles have been defined in this way to produce effects like lines with outlines. This section defines the two components as separate styles. For example, a minor road is first drawn as a black background (carriagewayOutline) that is then overlain with a yellow foreground (minorRoadLine) as below:

Figure 3: Example line style showing a minor road (carriagewayOutline) as a black background overlaid with a yellow foreground (minorRoadLine).

The line styles are defined in Line styles.

3.1.8 Colour palette definitions

Table 11: Colour palette definitions table.

	Hex (r,g,b)	Style name
	000000 (0,0,0)	
	333333 (51,51,51)	
	0000CC(0,0,204)	
	FF0000 (255,0,0)	
	009966 (0, 153, 102)	
	666666 (102,102,102)	
	669966 (102, 153, 102)	
	FF0099 (255, 0, 153)	
	FF9900 (255,153,0)	
	0099FF (0,153,255)	
	00CCFF (0, 204, 255)	
	999999 (153, 153, 153)	
	FFD7C3 (255,215,195)	structureFill
	DCDCBE (220,220,190)	heritageFill
	66CCCC (102, 204, 204)	
	FFFF00 (255, 255, 0)	
	FF00FF (255,0,255)	
	D2D2AA (210,210,170)	madeSurfaceFill, stepFill
	D7D7D7 (215,215,215)	roadFill
	CCCCCC (204,204,204)	pathFill, railFill
	FFDCAF (255,220,175)	buildingFill
	FFCC99 (255,204,153)	glasshouseFill
	D2FFB4 (210,255,180)	naturalSurfaceFill
	DCFFBE (220,255,190)	naturalEnvironmentFill
	BEFFFF (190,255,255)	inlandWaterFill, tidalWaterFill
	FFFFCC (255,255,204)	multipleSurfaceFill
	FFFFFF (255,255,255)	unclassifiedFill

3.1.9 Fonts

The gml2svg.xsl declares the use of the Arial font for Ordnance Survey's standard depiction of text string. Within the XSL file, the text colour is dictated by the descriptiveGroup, as is the use of italics. The textRendering complex attribute for a CartographicText feature contains information on the placement, orientation and height for rendering the text.

NOTE: A font value of 0, 1, 2, or 3 as used in Land-Line® is also provided that can optionally be used for depiction. The suggested fonts for cartographic display are:

0 – Lutheran (used for non-Roman antiquities)

1 – Normal – medium Roman font

2 – Light Roman font (used primarily for building numbers, Roman antiquities, and some administrative names particularly in 1:10 000 areas)

3 – Suppressed text not supplied in Land-Line due to space limitations.

3.2 Shared symbol geometry

3.2.1 *boulderGeometry*

Table 12: *boulderGeometry* example geometry and visual representation.

Geometry	Shape
<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’ />	

3.2.2 *circleFillGeometry*

Table 13: *circelFillGeometry* example geometry and visual representation.

Geometry	Shape
<circle r=‘0.05’ cx=‘0’ cy=‘0.0’/>	

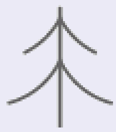
3.2.3 *circleGeometry*

Table 14: *circleGeometry* example geometry and visual representation.

Geometry	Shape
<circle r=‘0.375’ cx=‘0’ cy=‘0’/>	

3.2.4 *coniferousTreeGeometry*

Table 15: *coniferousTreeGeometry* example geometry and visual representation.

Geometry	Shape
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’/>	

3.2.5 *crossGeometry*

Table 16: *crossGeometry* example geometry and visual representation.

Geometry	Shape
<polyline points=‘0.000,-0.775 0.000,0.775’/> <polyline points=‘-0.775,0.000 0.775,0.000’/>	

3.2.6 *nonconiferousTreeGeometry*

Table 17: *nonconiferousTreeGeometry* example geometry and visual representation.

Geometry	Shape
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'/>	

3.3 Point symbols

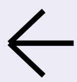
3.3.1 *airHeightSymbol*

Table 18: *airHeightSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#0099ff; fill:none; stroke-width:0.087 Geometry: See *crossGeometry* in Shared symbol geometry above.	

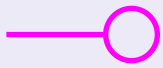
3.3.2 *benchMarkSymbol*

Table 19: *benchMarkSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#000000;fill:none;stroke-width:0.087 Geometry: <polyline points='0.707,0.707 0.0,0.0 0.707,-0.707'/> <line x1='1.42' y1='0.0' x2='0.0' y2='0.0'/>	

3.3.3 *boundaryMereingChangeSymbol*

Table 20: *boundaryMereingChangeSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#ff00ff;fill:none;stroke-width:0.087 Geometry: <circle r='0.625' cx='2.875' cy='0.0'/> <line x1='0.0' y1='0.0' x2='2.25' y2='0.0'/>	

3.3.4 *boundaryPostSymbol*

Table 21: *boundaryPostSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#ff00ff;fill:none;stroke-width:0.087 Geometry: See *circleGeometry* in Shared symbol geometry above.	

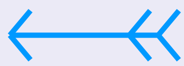
3.3.5 *culvertSymbol*

Table 22: *culvertSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#0099ff;stroke-width:0.087 Geometry: <polyline points='-0.5,0 0.5,0'/>	

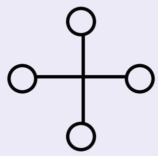
3.3.6 *flowArrowSymbol*

Table 23: *flowArrowSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#0099ff;fill:none;stroke-width:0.087 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’ />	

3.3.7 *heritageSiteOfSymbol*

Table 24: *heritageSiteOfSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#000000;fill:none;stroke-width:0.087 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’/>	

3.3.8 *landformDisusedSymbol*

Table 25: *LandformDisusedSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: See *circleGeometry* in Shared symbol geometry above.	

3.3.9 *pointSymbol*

Table 26: *pointSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#000000;fill:#000000;stroke-width:0.087 Geometry: See *circleGeometry* in Shared symbol geometry above.	

3.3.10 *positionedBoulderSymbol*

Table 27: *positionedBoulderSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: See *boulderGeometry* in Shared symbol geometry above.	

3.3.11 *positionedConiferousTreeSymbol*

Table 28: *positionedConiferousTreeSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: See *coniferousTreeGeometry* in Shared symbol geometry above.	

3.3.12 *positionedNonconiferousTreeSymbol*

Table 29: *positionedNonconiferousTreeSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: See *nonconiferousTreeGeometry* in Shared symbol geometry above.	

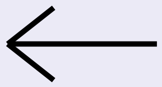
3.3.13 *railwaySwitchSymbol*

Table 30: *railwaySwitchSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#000000;stroke-width:0.087 Geometry: <polyline points='-0.72,0 0.72,0'/>	

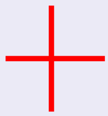
3.3.14 *roadFlowSymbol*

Table 31: *roadFlowSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#000000;fill:none;stroke-width:0.087 Geometry: <polyline points='0.707,0.707 0.0,0.0 0.707,-0.707'/> <line x1='2.42' y1='0.0' x2='0.0' y2='0.0'/>	

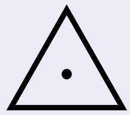
3.3.15 *spotHeightSymbol*

Table 32: *spotHeightSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#ff0000; fill:none; stroke-width:0.087 Geometry: See *crossGeometry* in Shared symbol geometry above.	

3.3.16 *triangulationStationSymbol*

Table 33: *triangulationStationSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#000000;stroke-width:0.087 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'/>	

3.3.17 *waterPointSymbol*

Table 34: *waterPointSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#0099ff;fill:#0099ff;stroke-width:0.087 Geometry: See *circleGeometry* in Shared symbol geometry above.	

3.4 Fill symbols

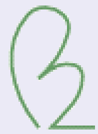
3.4.1 *boulderFillSymbol*

Table 35: *boulderFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: See *boulderGeometry* in Shared symbol geometry above.	

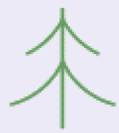
3.4.2 *bushFillSymbol*

Table 36: *bushFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 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' />	

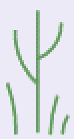
3.4.3 *coniferousTreeFillSymbol*

Table 37: *coniferousTreeFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 Geometry: See *coniferousTreeGeometry* in Shared symbol geometry above.	

3.4.4 *coppiceFillSymbol*

Table 38: *coppiceFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 Geometry: <polyline points='0.000,-1.219 0.000,1.819' /> <polyline points='-0.567,1.330 -0.556,1.035 -0.492,0.746 -0.377,0.473 -0.214,0.226 -0.010,0.012' /> <polyline points='-0.547,-1.248 -0.567,-0.817 -0.639,-0.392 -0.762,0.022' /> <polyline points='0.010,0.627 0.207,0.736 0.372,0.890 0.494,1.078 0.567,1.292 0.586,1.516' /> <polyline points='0.489,-0.291 0.364,-0.768 0.313,-1.258' /> <polyline points='0.752,-0.789 0.653,-1.009 0.616,-1.248' />	

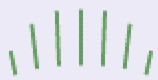
3.4.5 *foreshoreFillSymbol*

Table 39: *foreshoreFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#0099ff;fill:#0099ff;stroke-width:0.087 Geometry: See *circleFillGeometry* in Shared symbol geometry above.	

3.4.6 *heathFillSymbol*

Table 40: *heathFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 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' />	

3.4.7 *manmadeLandformFillSymbol*

Table 41: *manmadeLandformFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 Geometry: <polyline points='-1,-1 25,25'/>	

3.4.8 *marshFillSymbol*

Table 42: *marshFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: fill:none;stroke-width:0.087 Geometry: <g style=‘stroke:#0099ff’> <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’ /> </g> <g style=‘stroke:#669966;’> <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’ /> </g>	

3.4.9 *multiVegetationFillSymbol*

Table 43: *multiVegetationFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:669966;stroke-width:0.087 Geometry: See *circleFillGeometry* in Shared symbol geometry above.	

3.4.10 *naturalLandformFillSymbol*

Table 44: *naturalLandformFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: <polyline points=‘0,25 25,0’/>	

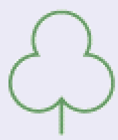
3.4.11 *nonconiferousTreeFillSymbol*

Table 45: *nonconiferousTreeFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 Geometry: See *nonconiferousTreeGeometry* in Shared symbol geometry above.	

3.4.12 *orchardFillSymbol*

Table 46: *orchardFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 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’/>	

3.4.13 *rockFillSymbol*

Table 47: *rockFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
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' />	

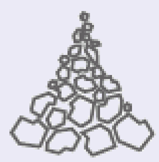
3.4.14 *roughGrassFillSymbol*

Table 48: *roughGrassFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
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' />	

3.4.15 *screeFillSymbol*

Table 49: *screeFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: <polyline points='1.449,-1.302 1.777,-0.894 1.582,-0.574 1.445,-0.628 1.170,-0.400 0.895,-0.608 0.803,-0.734 0.924,-1.075 1.449,-1.302' /> <polyline points='-1.033,-1.217 -0.841,-0.786 -1.085,-0.544 -1.195,-0.625 -1.497,-0.488 -1.741,-0.865 -1.545,-1.136 -1.033,-1.217' /> <polyline points='0.273,-1.429 0.834,-1.207 0.690,-0.817 0.460,-0.673 0.022,-0.867 0.158,-1.005 0.104,-1.235 0.273,-1.429' /> <polyline points='-0.208,-1.302 -0.039,-0.986 -0.235,-0.768 -0.636,-0.831 -0.844,-1.108 -0.864,-1.296 -0.555,-1.374 -0.392,-1.255 -0.207,-1.302' /> <polyline points='-0.009,-0.716 0.228,-0.562 0.315,-0.122 -0.050,0.053 -0.266,-0.147 -0.199,-0.244 -0.323,-0.492 -0.009,-0.716' /> <polyline points='0.665,-0.616 0.960,-0.387 1.008,-0.077 0.949,0.078 0.652,0.002 0.579,-0.161 0.408,-0.206 0.421,-0.529 0.667,-0.614' /> <polyline points='-1.254,-0.316 -1.173,-0.016 -0.809,0.123 -0.634,0.010 -0.665,-0.154 -0.814,-0.145 -1.006,-0.470 -1.254,-0.316' />	

Style and Geometry	Shape
<polyline points=‘-0.690,-0.763 -0.762,-0.731 -0.853,-0.531 -0.697,-0.271 -0.402,-0.341 -0.433,-0.632 -0.690,-0.763’ /> <polyline points=‘-0.428,-0.069 -0.136,0.125 -0.266,0.331 -0.408,0.381 -0.643,0.214 -0.541,0.151 -0.546,0.017 -0.428,-0.069’ /> <polyline points=‘-0.147,0.459 0.049,0.547 0.122,0.457 0.245,0.451 0.365,0.290 0.280,0.213 0.079,0.159 -0.135,0.283 -0.147,0.459’ /> <polyline points=‘0.658,0.150 0.953,0.220 0.877,0.387 0.758,0.419 0.714,0.518 0.505,0.477 0.480,0.308 0.658,0.150’ /> <polyline points=‘-0.224,0.698 -0.210,0.940 0.047,0.990 0.191,0.892 0.137,0.671 -0.029,0.683 -0.063,0.624 -0.224,0.698’ /> <polyline points=‘0.336,0.825 0.392,0.881 0.376,1.152 0.131,1.317 0.099,1.161 0.336,0.825’ /> <polyline points=‘-0.521,0.432 -0.320,0.480 -0.304,0.705 -0.463,0.796 -0.596,0.619 -0.521,0.432’ /> <polyline points=‘0.345,0.487 0.570,0.575 0.426,0.791 0.243,0.712 0.306,0.653 0.275,0.561 0.345,0.487’ /> <polyline points=‘-0.012,1.409 -0.021,1.589 0.049,1.624 0.007,1.696 -0.084,1.696 -0.187,1.542 -0.151,1.405 -0.012,1.405’ /> <polyline points=‘-0.203,1.021 -0.054,1.084 -0.011,1.292 -0.145,1.292 -0.271,1.226 -0.304,1.086 -0.203,1.021’ /> <polyline points=‘0.370,-0.090 0.546,-0.048 0.550,0.132 0.426,0.220 0.311,0.067 0.370,-0.090’ /> <polyline points=‘-0.350,0.850 -0.304,0.956 -0.363,1.016 -0.467,1.028 -0.525,0.938 -0.480,0.866 -0.350,0.850’ /> <polyline points=‘0.041,1.759 0.097,1.853 0.198,1.835 0.259,1.777 0.212,1.669 0.085,1.691 0.041,1.759’ /> <polyline points=‘-0.742,0.247 -0.650,0.283 -0.614,0.371 -0.622,0.410 -0.704,0.414 -0.783,0.369 -0.805,0.288 -0.740,0.247’ /> <polyline points=‘0.103,1.400 0.198,1.457 0.164,1.569 0.068,1.585 0.031,1.477 0.103,1.4’ /> <polyline points=‘1.102,-0.328 1.206,-0.301 1.211,-0.186 1.127,-0.141 1.059,-0.228 1.102,-0.328’ /> <polyline points=‘0.239,1.339 0.246,1.411 0.408,1.386 0.444,1.321 0.316,1.278 0.239,1.339’ /> <polyline points=‘0.032,1.923 -0.009,2.025 0.050,2.109 0.147,2.063 0.139,1.950’ /> <polyline points=‘0.032,1.919 0.139,1.948’ />	

3.4.16 *smallBoulderFillSymbol*

Table 50: *smallBoulderFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 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’/>	

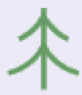
3.4.17 *smallBushFillSymbol*

Table 51: *smallBushFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 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’ />	

3.4.18 *smallConiferousTreeFillSymbol*

Table 52: *smallConiferousTreeFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 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'/>	

3.4.19 *smallNonconiferousTreeFillSymbol*

Table 53: *smallNonconiferousTreeFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#669966;fill:none;stroke-width:0.087 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'/>	

3.4.20 *smallRockFillSymbol*

Table 54: *smallRockFillSymbol* example style rule, geometry, and visual representation.

Style and Geometry	Shape
Style: stroke:#666666;fill:none;stroke-width:0.087 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' />	

3.5 Compound symbols

The symbols defined in the Fill symbols section may be combined to form aggregated symbols. To do this, the coordinates of the original symbols are translated by a specified offset. Compound symbols may be used as components to make up other compound symbols.

For example, to define the scrub fill symbol, we combine the *bushFillSymbol* and *smallBushFillSymbol* using the following translations:

Table 55: Compound *scrubFillSymbol* example.

bushFillSymbol: translate(-0.8 1) smallBushFillSymbol: translate(1.2 –1.2) The combined result, scrubFillSymbol, is drawn as:	

To define the mixed vegetation type of scrub and rough grass, the *scrubFillSymbol* created in the previous example is used in conjunction with *roughGrassFillSymbol*:

Table 56: Compound *roughGrassAndScrubFillSymbol* example.

roughGrassFillSymbol: translate(-1 -1) scrubFillSymbol: translate(1 1) The combined result, roughGrassAndScrubFillSymbol, is drawn as:	

3.5.1 Transformation 1 definitions

Offset:

Symbol 1 – translate(-1 0.3)
Symbol 2 – translate(1.75 -1)

Table 57: Transformation 1 compound symbol definitions table.

Compound symbol	Fill symbols	Shape
bouldersFillSymbol	1: boulderFillSymbol 2: smallBoulderFillSymbol	
rocksFillSymbol	1: rockFillSymbol 2: smallRockFillSymbol	

3.5.2 Transformation 2 definitions

Offset:

Symbol 1 – translate(-0.8 1)
Symbol 2 – translate(1.2 –1.2)

Table 58: Transformation 2 compound symbol definitions table.

Compound symbol	Fill symbols	Shape
coniferousTreesFillSymbol	1: coniferousTreeFillSymbol 2: smallConiferousTreeFillSymbol	
nonconiferousTreesFillSymbol	1: nonconiferousTreeFillSymbol 2: smallNonconiferousTreeFillSymbol	
scrubFillSymbol	1: bushFillSymbol 2: smallBushFillSymbol	

3.5.3 Transformation 3 definitions

Offset:

Symbol 1 – translate(-1 -1)
Symbol 2 – translate(1 1)

Table 59: Transformation 3 compound symbol definitions table.

Compound symbol	Fill symbols	Shape
coniferousTreesAndScrubFillSymbol	1: coniferousTreesFillSymbol 2: scrubFillSymbol	
heathAndScrubFillSymbol	1: heathFillSymbol 2: scrubFillSymbol	
heathAndScatteredRocksFillSymbol	1: heathFillSymbol 2: smallRockFillSymbol	
nonconiferousTreesAndConiferousTreesFillSymbol	1: nonconiferousTreesFillSymbol 2: coniferousTreesFillSymbol	
nonconiferousTreesAndCoppiceFillSymbol	1: nonconiferousTreesFillSymbol 2: coppiceFillSymbol	
nonconiferousTreesAndScrubFillSymbol	1: nonconiferousTreesFillSymbol 2: scrubFillSymbol	

Compound symbol	Fill symbols	Shape
nonconiferousTreesAndScatteredRocksFillSymbol	1: nonconiferousTreesFillSymbol 2: smallRockFillSymbol	
coniferousTreesAndScatteredRocksFillSymbol	1: coniferousTreesFillSymbol 2: smallRockFillSymbol	
roughGrassAndBouldersFillSymbol	1: roughGrassFillSymbol 2: bouldersFillSymbol	
roughGrassAndConiferousTreesFillSymbol	1: roughGrassFillSymbol 2: coniferousTreesFillSymbol	
roughGrassAndHeathFillSymbol	1: roughGrassFillSymbol 2: heathFillSymbol	
roughGrassAndMarshFillSymbol	1: roughGrassFillSymbol 2: marshFillSymbol	
roughGrassAndNonconiferousTreesFillSymbol	1: roughGrassFillSymbol 2: nonconiferousTreesFillSymbol	
roughGrassAndRocksFillSymbol	1: roughGrassFillSymbol 2: rocksFillSymbol	
roughGrassAndScatteredBouldersFillSymbol	1: roughGrassFillSymbol 2: smallBouldersFillSymbol	
roughGrassAndScatteredNonconiferousTreesFillSymbol	1: roughGrassFillSymbol 2: smallNonconiferousTreeFillSymbol	
roughGrassAndScatteredRocksFillSymbol	1: roughGrassFillSymbol 2: smallRockFillSymbol	
roughGrassAndScrubFillSymbol	1: roughGrassFillSymbol 2: scrubFillSymbol	
scatteredNonconiferousTreesAndScatteredConiferousTreesFillSymbol	1: smallNonconiferousTreeFillSymbol 2: smallConiferousTreeFillSymbol	
scrubAndScatteredNonconiferousTreesFillSymbol	1: scrubFillSymbol 2: smallNonconiferousTreeFillSymbol	

3.5.4 Transformation 4 definitions

Offset:

Symbol 1 – translate(-2 -2)
Symbol 2 – translate(-0.5 0.5)
Symbol 3 – translate(2 2)

Table 60: Transformation 4 compound symbol definitions table.

Compound symbol	Fill symbols	Shape
rocksRoughGrassAndBouldersFillSymbol	1: rocksFillSymbol 2: roughGrassFillSymbol 3: bouldersFillSymbol	
roughGrassNonconiferousTreesAndConiferousTreesFillSymbol	1: roughGrassFillSymbol 2: nonconiferousTreesFillSymbol 3: coniferousTreesFillSymbol	
roughGrassNonconiferousTreesAndScrubFillSymbol	1: roughGrassFillSymbol 2: nonconiferousTreesFillSymbol 3: scrubFillSymbol	
scrubNonconiferousTreesAndCoppiceFillSymbol	1: scrubFillSymbol 2: nonconiferousTreesFillSymbol 3: coppiceFillSymbol	
scrubConiferousTreesAndNonconiferousTreesFillSymbol	1: scrubFillSymbol 2: coniferousTreesFillSymbol 3: nonconiferousTreesFillSymbol	

3.5.5 Transformation 5 definitions

Offset:

Symbol 1 – translate(0 -1)
Symbol 2 – translate(-2 1)
Symbol 3 – translate(2 1)

Table 61: Transformation 5 compound symbol definitions table.

Compound symbol	Fill symbols	Shape
roughGrassScatteredRocksAndBouldersFillSymbol	1: roughGrassFillSymbol 2: smallRockFillSymbol 3: bouldersFillSymbol	
roughGrassScatteredRocksAndHeathFillSymbol	1: roughGrassFillSymbol 2: smallRockFillSymbol 3: heathFillSymbol	
roughGrassScatteredRocksAndScatteredBouldersFillSymbol	1: roughGrassFillSymbol 2: smallRockFillSymbol 3: smallBoulderFillSymbol	
roughGrassScatteredNonconiferousTreesAndScrubFillSymbol	1: roughGrassFillSymbol 2: smallNonconiferousTreeFillSymbol 3: scrubFillSymbol	
scatteredConiferousTreesScatteredNonconiferousTreesAndScrubFillSymbol	1: smallConiferousTreeFillSymbol 2: smallNonconiferousTreeFillSymbol 3: scrubFillSymbol	

3.6 Pattern definitions

3.6.1 Creating a pattern

The symbols defined in Symbols and Compound symbols that end with the term *FillSymbol* are all used for pattern fills. The name of the pattern is taken from the symbol name by replacing *FillSymbol* with the term *Pattern*.

The exceptions to this principle are:

- *scatteredBouldersPattern* uses *smallBoulderFillSymbol*
- *scatteredRocksPattern* uses *smallRockFillSymbol*
- *scatteredConiferousTreesPattern* uses *smallConiferousTreeFillSymbol*
- *scatteredNonconiferousTreesPattern* uses *smallNonconiferousTreeFillSymbol*

To produce a particular pattern, the appropriate fill symbol is distributed on a grid that is repeated to cover the polygon being drawn. The sections below detail the grids that are currently in use.

3.6.2 Landform grid

Table 62: Landform grid table.

Variables	Value/s
Size	(25,25)
Suitable symbols	manmadeLandformFillSymbol naturalLandformFillSymbol
Symbol coordinates	0,-21 0,-18 0,-15 0,-12 0,-9 0,-6 0,-3 0,0 0,3 0,6 0,9 0,12 0,15 0,18 0,21
Fill colour	none
Patterns	manmadeLandformPattern naturalLandformPattern

3.6.3 Small regular grid

Table 63: Small regular grid table.

Variables	Value/s
Size	(3,3)
Suitable symbols	foreshoreFillSymbol multiVegetationFillSymbol
Fill colour	for foreshorePattern – CCFFF (RGB 204,255,255) otherwise – CCFFCC (RGB 204,255,204)
Patterns	foreshorePattern multiVegetationPattern

3.6.4 Regular grid

Table 64: Regular grid table.

Variables	Value/s
Size	(6,6)
Suitable symbols	orchardFillSymbol
Fill colour	CCFFCC (RGB 204,255,204)
Patterns	orchardPattern

3.6.5 Natural environment grid

Table 65: Natural environment grid table.

Property/Description	Value/s
Size	(50,50)
Suitable symbols	All natural vegetation and surface cover symbol types except for orchard.
Symbol coordinates	5,3 5,25 10,12 10,35 25,45 42,15 37,27 27,14 36,37 42,45 39,3 18,33
Fill colour	CCFFCC (RGB 204,255,204)
Patterns	roughGrassPattern heathPattern marshPattern scatteredBouldersPattern scatteredRocksPattern scatteredConiferousTreesPattern scatteredNonconiferousTreesPattern coppicePattern orchardPattern bouldersPattern rocksPattern screePattern scrubPattern coniferousTreesPattern nonconiferousTreesPattern coniferousTreesAndScatteredRocksPattern coniferousTreesAndScrubPattern heathAndScrubPattern heathAndScatteredRocksPattern nonconiferousTreesAndConiferousTreesPattern nonconiferousTreesAndCoppicePattern nonconiferousTreesAndScatteredRocksPattern nonconiferousTreesAndScrubPattern

Property/Description	Value/s
	roughGrassAndBouldersPattern roughGrassAndConiferousTreesPattern roughGrassAndHeathPattern roughGrassAndMarshPattern roughGrassAndNonconiferousTreesPattern roughGrassAndRocksPattern roughGrassAndScatteredBouldersPattern roughGrassAndScatteredNonconiferousTreesPattern roughGrassAndScatteredRocksPattern roughGrassAndScrubPattern scatteredNonconiferousTreesAndScatteredConiferousTreesPattern scrubAndScatteredNonconiferousTreesPattern rocksRoughGrassAndBouldersPattern roughGrassNonconiferousTreesAndConiferousTreesPattern roughGrassNonconiferousTreesAndScrubPattern roughGrassScatteredRocksAndBouldersPattern roughGrassScatteredRocksAndHeathPattern roughGrassScatteredRocksAndScatteredBouldersPattern roughGrassScatteredNonconiferousTreesAndScrubPattern scrubConiferousTreesAndNonconiferousTreesPattern scrubNonconiferousTreesAndCoppicePattern scatteredConiferousTreesScatteredNonconiferousTreesAndScrubPattern

3.6.6 Example grid pattern

In this example, *heathAndScrubPattern* uses the natural environment grid to produce the pattern below:

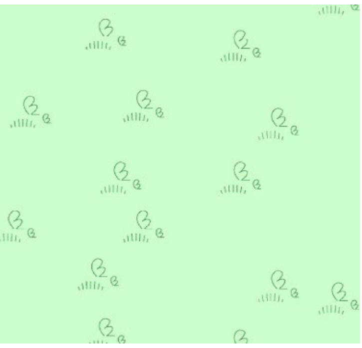


Figure 4: Example *heathAndScrubPattern* using the natural environment grid.

This is then applied as a polygon fill:

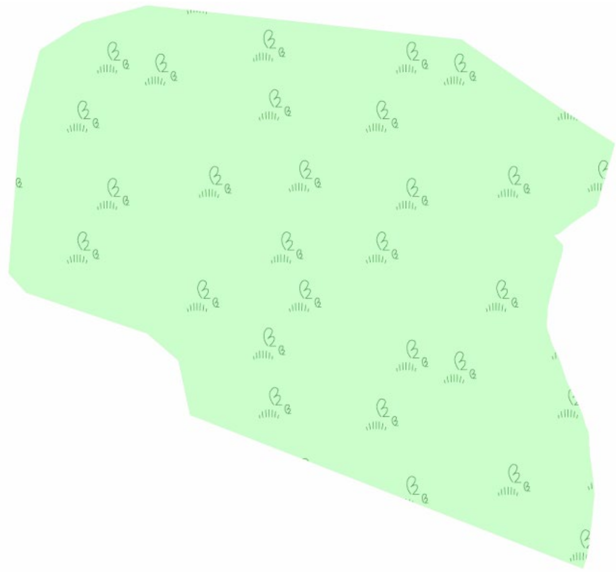


Figure 5: Example heathAndScrubPattern using the natural environment grid applied as a polygon fill.

3.7 Line styles

3.7.1 Default

Table 66: Default line style table.

Name	Attributes	Colour	Visual
defaultLine	stroke-width – 0.07	333333	

3.7.2 Default dashed

Table 67: Default dashed line style table.

Name	Attributes	Colour	Visual
defaultDashedLine	stroke-width – 0.1 stroke-dasharray – 0.5, 0.5	333333	

3.7.3 Building

Table 68: Building line style table.

Name	Attributes	Colour	Visual
buildingLine	stroke-width – 0.07	000000	

3.7.4 Building overhead

Table 69: Building overhead line style table.

Name	Attributes	Colour	Visual
buildingOverheadLine	stroke-width – 0.1 stroke-dasharray – 0.5, 0.5	000000	

3.7.5 Water bold

Table 70: Water bold line style table.

Name	Attributes	Colour	Visual
waterBoldLine	stroke-width – 0.4	00CCFF	

3.7.6 Water

Table 71: Water line style table.

Name	Attributes	Colour	Visual
waterLine	stroke-width – 0.07	0099FF	

3.7.7 Underground

Table 72: Default underground line style table.

Name	Attributes	Colour	Visual
defaultUndergroundLine	stroke-width – 0.2 stroke-dasharray – 3.0, 1.0	333333	

3.7.8 Structure overhead

Table 73: Structure overhead line style table.

Name	Attributes	Colour	Visual
structureOverheadLine	stroke-width – 0.2 stroke-dasharray – 2.0, 1.0	CC9966	

3.7.9 Landform bold

Table 74: Landform bold line style table.

Name	Attributes	Colour	Visual
landformBoldLine	stroke-width – 0.3 stroke-dasharray – 0.8, 0.8	D06800	

3.7.10 Landform

Table 75: Landform line style table.

Name	Attributes	Colour	Visual
landformLine	stroke-width – 0.1 stroke-dasharray – 0.8, 0.8	E07000	

3.7.11 Narrow-gauge railway alignment

Table 76: Narrow-gauge railway alignment line style table.

Name	Attributes	Colour	Visual
narrowGaugeRailwayAlignmentLine	stroke-width – 0.3	333333	

3.7.12 Standard-gauge rail

Table 77: Standard-gauge rail line style table.

Name	Attributes	Colour	Visual
standardGaugeRailLine	stroke-width – 0.15	333333	

3.7.13 Parish

Table 78: Parish line style table.

Name	Attributes	Colour	Visual
parishLine	stroke-width – 0.4 stroke-dasharray – 0.4, 0.8	FF00FF	

3.7.14 Electoral

Table 79: Electoral line style table.

Name	Attributes	Colour	Visual
electoralLine	stroke-width – 0.2 stroke-dasharray – 1.5, 0.5	FF00FF	

3.7.15 County

Table 80: County line style table.

Name	Attributes	Colour	Visual
countyLine	stroke-width – 0.4 stroke-dasharray – 2.0, 1.0	FF00FF	

3.7.16 Parliamentary

Table 81: Parliamentary line style table.

Name	Attributes	Colour	Visual
parliamentaryLine	stroke-width – 0.4 stroke-dasharray – 1.8, 0.5	FF00FF	

3.7.17 District

Table 82: District line style table.

Name	Attributes	Colour	Visual
districtLine	stroke-width – 0.3 stroke-dasharray – 1.5, 0.8	FF00FF	

3.7.18 Closing

Table 83: Closing line style table.

Name	Attributes	Colour	Visual
closingLine	stroke-width – 0.05 stroke-dasharray – 0.5, 0.5	FF0000	

4. Related documentation

You can find additional information and documentation on the [OS MasterMap Topography Layer Product page](https://www.ordnancesurvey.co.uk/business-government/tools-support/mastermap-topography-support) (https://www.ordnancesurvey.co.uk/business-government/tools-support/mastermap-topography-support).

We recommend you read the following guides:

- *OS MasterMap Topography Layer – Styling Getting Started Guide*
- *OS MasterMap Topography Layer – Overview*
- *OS MasterMap Topography Layer – Technical Specification*
- *OS MasterMap Topography Layer – Getting Started Guide*
- *Getting Started with GeoPackage*
- *Getting Started with Vector Tiles*

Addendum A: Cartographic styling for new descriptive terms

This section is an addendum to Section 2 above with a guide to applying styles to Topography Layer features enriched with additional descriptive terms. Only features with new descriptive terms have been provided.

TopographicArea

Table 84: TopographicArea mapping table for new descriptive terms.

descriptiveGroup	descriptiveTerm	make	Style name
General Surface	Agricultural Land	Natural	agriculturalLandFill
General Surface + Structure	Aqueduct	Manmade	structureFill
Inland Water + Structure	Aqueduct + Watercourse	Manmade	constructedWaterFill
Structure	Bridge	Manmade	structureFill
Structure	Capstan	Manmade	structureFill
Landform	Cave	Natural	naturalLandformPattern
Inland Water	Canal	Natural	constructedWaterFill
Tidal Water	Canal	Natural	constructedWaterFill
Inland Water	Canal Feeder	Natural	inlandWaterFill
Building	Chimney	Manmade	buildingFill
Structure	Chimney	Manmade	structureFill
Inland Water	Collects	Natural	naturalEnvironmentFill with collectsAndSpreadsFillSymbol and collectsAndSpreadsPattern
Inland Water	Conduit	Manmade	constructedWaterFill
Inland Water + Structure	Conduit	Manmade	constructedWaterFill
Building	Conduit	Manmade	buildingFill
Structure	Conveyor	Manmade	structureFill
Building + Structure	Conveyor	Manmade	buildingFill
Structure	Crane	Manmade	structureFill
Building + Structure	Crane	Manmade	buildingFill
Structure	Cross	Manmade	structureFill

descriptiveGroup	descriptiveTerm	make	Style name
Inland Water	Drain	Natural	constructedWaterFill
Tidal Water	Drain	Natural	constructedWaterFill
Building	Electricity Sub Station	Manmade	buildingFill
General Surface	Electricity Sub Station	Manmade	madeSurfaceFill
Structure	Electricity Sub Station	Manmade	structureFill
Path + Structure	Footbridge	Manmade	structureFill
Building + Structure	Footbridge	Manmade	buildingFill
Inland Water + Road Or Track	Ford	Natural	constructedWaterFill
Road Or Track + Tidal Water	Ford	Natural	constructedWaterFill
Inland Water + Structure	Fountain	Manmade	constructedWaterFill
Building	Gantry	Manmade	buildingFill
Structure	Gantry	Manmade	structureFill
Building	Gas Governor	Manmade	buildingFill
General Surface	Gas Governor	Manmade	madeSurfaceFill
Structure	Gas Governor	Manmade	structureFill
Structure	Groyne	Manmade	structureFill
General Surface	Landfill	Manmade	multipleSurfaceFill
Landform	Landfill	Manmade	multipleSurfaceFill
General Surface	Landfill (Inactive)	Natural	multipleSurfaceFill
Landform	Landfill (Inactive)	Natural	multipleSurfaceFill
Rail + Road Or Track	Level Crossing	Manmade	roadFill
Structure	Lighting Gantry	Manmade	structureFill
Rail + Structure	Lighting Gantry	Manmade	structureFill
Inland Water	Lock	Manmade	constructedWaterFill
Inland Water + Structure	Lock	Manmade	constructedWaterFill
Structure	Lock Gate	Manmade	structureFill
Natural Environment	Marsh	Natural	naturalEnvironmentFill with marshFillSymbol and marshPattern

descriptiveGroup	descriptiveTerm	make	Style name
Natural Environment + Rail	Marsh	Natural	naturalEnvironmentFill with marshFillSymbol and marshPattern
Natural Environment + Structure	Marsh	Natural	naturalEnvironmentFill with marshFillSymbol and marshPattern
Natural Environment + Roadside	Marsh	Natural	naturalEnvironmentFill with marshFillSymbol and marshPattern
Historic Interest + Structure	Mast	Manmade	structureFill
Structure	Mast	Manmade	structureFill
Inland Water	Mill Leat	Manmade	constructedWaterFill
Inland Water	Mine Leat	Manmade	constructedWaterFill
Inland Water + Structure	Mine Leat	Manmade	constructedWaterFill
General Surface	Mineral Workings	Manmade	multipleSurfaceFill
Landform	Mineral Workings	Manmade	multipleSurfaceFill
General Surface	Mineral Workings (Inactive)	Natural	multipleSurfaceFill
Landform	Mineral Workings (Inactive)	Natural	multipleSurfaceFill
General Surface	Mud	Natural	mudFill
General Surface	Mud + Sand	Natural	mudFill with sandFillSymbol and sandPattern
General Surface	Mud + Shingle	Natural	mudFill with shingleFillSymbol and shinglePattern
Natural Environment + Tidal Water	Foreshore + Mud	Natural	mudFill
Natural Environment + Tidal Water	Foreshore + Mud + Sand	Natural	mudFill with sandFillSymbol and sandPattern
Natural Environment + Tidal Water	Foreshore + Mud + Shingle	Natural	mudFill with shingleFillSymbol and shinglePattern
Building	Public Convenience	Manmade	buildingFill
General Surface	Public Convenience	Manmade	multipleSurfaceFill
Structure	Public Convenience	Manmade	structureFill
Building	Rail Signal Gantry	Manmade	buildingFill
Rail + Structure	Rail Signal Gantry	Manmade	structureFill

descriptiveGroup	descriptiveTerm	make	Style name
Natural Environment + Tidal Water	Reeds	Natural	tidalWaterFill with reedsFillSymbol and reedsPattern
Inland Water + Natural Environment	Reeds + Static Water	Natural	inlandWaterFill with reedsFillSymbol and reedsPattern
Natural Environment + Tidal Water	Foreshore + Reeds	Natural	tidalWaterFill with reedsFillSymbol and reedsPattern
Inland Water + Natural Environment	Reeds + Reservoir	Natural	constructedWaterFill with reedsFillSymbol and reedsPattern
Inland Water	Reservior	Natural	constructedWaterFill
Natural Environment	Saltmarsh	Natural	naturalEnvironmentFill with saltmarshFillSymbol and saltmarshPattern
Natural Environment + Rail	Saltmarsh	Natural	naturalEnvironmentFill with saltmarshFillSymbol and saltmarshPattern
Natural Environment + Roadside	Saltmarsh	Natural	naturalEnvironmentFill with saltmarshFillSymbol and saltmarshPattern
Natural Environment + Tidal Water	Saltmarsh	Natural	tidalWaterFill with saltmarshFillSymbol and saltmarshPattern
General Surface	Sand	Natural	sandFill with sandFillSymbol and sandPattern
Roadside	Sand	Natural	sandFill with sandFillSymbol and sandPattern
Rail	Sand	Natural	sandFill with sandFillSymbol and sandPattern
Natural Environment + Tidal Water	Foreshore + Sand	Natural	sandFill with sandFillSymbol and sandPattern
General Surface	Shingle	Natural	shingleFill with shingleFillSymbol and shinglePattern
Natural	Foreshore + Shingle	Natural	shingleFill with shingleFillSymbol and shinglePattern
Roadside	Shingle	Natural	shingleFill with shingleFillSymbol and shinglePattern
Rail	Shingle	Natural	shingleFill with shingleFillSymbol and shinglePattern
Inland Water	Sinks	Natural	inlandWaterFill
General Surface	Slipway	Manmade	madeSurfaceFill

descriptiveGroup	descriptiveTerm	make	Style name
General Surface + Tidal Water	Foreshore + Slipway	Manmade	madeSurfaceFill
General Surface + Structure	Slipway	Manmade	madeSurfaceFill
General Surface	Slag Heap	Manmade	multipleSurfaceFill
General Surface	Slag Heap (Inactive)	Natural	multipleSurfaceFill
General Surface + Tidal Water	Foreshore + Sloping Masonry	Manmade	slopingMasonryFill
General Surface	Sloping Masonry	Manmade	slopingMasonryFill
Path + Structure	Sloping Masonry	Manmade	slopingMasonryFill
Rail	Sloping Masonry	Manmade	slopingMasonryFill
Roadside	Sloping Masonry	Manmade	slopingMasonryFill
General Surface	Spoil Heap	Manmade	multipleSurfaceFill
General Surface	Spoil Heap (Inactive)	Natural	multipleSurfaceFill
General Surface + Tidal Water	Foreshore + Spreads	Natural	tidalWaterFill with collectsAndSpreadsFillSymbol and collectsAndSpreadsPattern
General Surface	Spreads	Natural	naturalEnvironmentFill with collectsAndSpreadsFillSymbol and collectsAndSpreadsPattern
Historic Interest + Inland Water	Spring	Natural	inlandWaterFill
Inland Water	Spring	Natural	inlandWaterFill
Inland Water + Structure	Spring	Natural	inlandWaterFill
Inland Water	Static Water	Natural	inlandWaterFill
Inland Water	Static Water	Manmade	inlandWaterFill
General Surface + Tidal Water	Swimming Pool	Manmade	constructedWaterFill
Inland Water	Swimming Pool	Manmade	constructedWaterFill
Building	Tank	Manmade	buildingFill
Building + Structure	Tank	Manmade	buildingFill
General Surface	Tank	Manmade	structureFill
General Surface	Tank	Natural	structureFill
Structure	Tank	Manmade	structureFill

descriptiveGroup	descriptiveTerm	make	Style name
Inland Water + Structure	Tank	Natural	inlandWaterFill
Inland Water + Structure	Tank	Manmade	inlandWaterFill
Structure	Telecommunications Mast	Manmade	structureFill
Inland Water	Watercourse	Natural	inlandWaterFill
Inland Water	Waterfall	Natural	inlandWaterFill
Structure + Tidal Water	Foreshore + Weir	Manmade	tidalWaterFill
Inland Water + Structure	Weir	Manmade	inlandWaterFill
Building	Weir	Manmade	buildingFill
Inland Water + Structure	Well	Manmade	inlandWaterFill
Building	Well	Manmade	buildingFill
Building + Historic Interest	Well	Manmade	buildingFill
Building	Wind Turbine	Manmade	buildingFill
Structure	Wind Turbine	Manmade	structureFill

TopographicLine

Table 85: TopographicLine mapping table for new descriptive terms.

descriptiveGroup	descriptiveTerm	physicalPresence	make	Style name
General Feature	Cattle Grid	Edge/Limit		defaultDashedLine
General Feature	Cattle Grid	Obstructing		defaultLine
Inland Water	Canal Feeder	Edge/Limit		waterLine
Inland Water	Collects	Edge/Limit		waterLine
Inland Water	Conduit	Edge/Limit		waterLine
Inland Water + Structure	Conduit	Edge/Limit		waterLine
Inland Water + Structure	Conduit	Obstructing		defaultLine
General Feature	Conveyor	Obstructing		defaultLine
General Feature	Conveyor			defaultLine

descriptiveGroup	descriptiveTerm	physicalPresence	make	Style name
General Feature	Crane + Overhead Construction			defaultDashedLine
Inland Water	Drain			waterLine
Inland Water	Ford	Edge/Limit		waterLine
General Feature	Gantry + Overhead Construction			defaultDashedLine
General Feature	Groyne	Obstructing		seaDefenceLine
Inland Water	Culvert + Issues	Edge/Limit		waterLine
General Feature	Lighting Gantry + Overhead Construction			defaultDashedLine
General Feature	Line Of Mooring Posts			postsLine
General Feature	Line Of Posts			postsLine
General Feature	Lock Gate	Obstructing		defaultLine
Inland Water	Mill Leat	Edge/Limit		waterLine
Inland Water	Mine Leat	Edge/Limit		waterLine
Inland Water + Structure	Mine Leat	Edge/Limit		waterLine
Building + Tidal Water	Mean High Water (Springs) + Normal Tidal Limit + Outline	Obstructing	Manmade	waterBoldLine
General Feature + Tidal Water	Mean High Water (Springs) + Normal Tidal Limit	Edge/Limit		waterBoldLine
General Feature + Tidal Water	Mean High Water (Springs) + Normal Tidal Limit	Obstructing		waterBoldLine
Structure + Tidal Water	Mean High Water (Springs) + Normal Tidal Limit	Obstructing	Manmade	waterBoldLine
Tidal Water	Mean High Water (Springs) + Normal Tidal Limit	Edge/Limit	Natural	waterBoldLine
General Feature	Overhead Construction + Rail Signal Gantry			defaultDashedLine
General Feature	Slipway	Edge/Limit		defaultLine
General Feature	Sloping Masonry	Edge/Limit		defaultLine

descriptiveGroup	descriptiveTerm	physicalPresence	make	Style name
General Feature	Sluice	Obstructing	Manmade	defaultLine
Inland Water	Spreads	Edge/Limit		waterLine
General Feature	Spring	Obstructing		
Inland Water	Culvert + Spring	Edge/Limit		
Inland Water	Watercourse	Edge/Limit		
Inland Water	Waterfall	Edge/Limit	Natural	
General Feature	Waterfall (vertical)	Edge/Limit	Natural	
Inland Water + Structure	Weir	Obstructing		
Structure + Tidal Water	Mean High Water (Springs) + Weir	Obstructing	Manmade	

TopographicPoint

Table 86: TopographicPoint mapping table for new descriptive terms.

descriptiveGroup	descriptiveTerm	make	Style name
Structure	Capstan	Manmade	pointSymbol
Historic Interest + Structure	Cave		caveSymbol
Landform	Cave	Natural	caveSymbol
Structure	Chimney	Manmade	pointSymbol
Inland Water	Collects	Natural	waterPointSymbol
Structure	Crane	Manmade	pointSymbol
Structure	Crane + Overhead Construction	Manmade	pointSymbol
Political Or Administrative + Structure	Boundary Post Or Stone + Cross	Manmade	boundaryPostSymbol
Historic Interest + Structure	Cross	Manmade	crossSymbol
Historic Interest + Structure	Cross + Site Of Heritage	Manmade	heritageSiteOfSymbol
Structure	Cross	Manmade	crossSymbol
Historic Interest + Inland Water + Structure	Cross + Well	Manmade	waterPointSymbol

descriptiveGroup	descriptiveTerm	make	Style name
Historic Interest + Inland Water + Structure	Cross + Site Of Heritage + Well	Manmade	heritageSiteOfSymbol
Political Or Administrative + Roadside + Structure	Boundary Post Or Stone + Distance Marker	Manmade	boundaryPostSymbol
Political Or Administrative + Structure	Boundary Post Or Stone + Distance Marker	Manmade	boundaryPostSymbol
Rail + Structure	Distance Marker	Manmade	pointSymbol
Historic Interest + Structure	Distance Marker	Manmade	pointSymbol
Structure	Distance Marker	Manmade	pointSymbol
Roadside + Structure	Distance Marker	Manmade	pointSymbol
Historic Interest + Structure	Distance Marker + Site Of Heritage	Manmade	heritageSiteOfSymbol
Structure	Electricity Sub Station	Manmade	pointSymbol
Structure	Emergency Telephone	Manmade	emergencyTelephoneSymbol
Political Or Administrative + Structure	Boundary Post Or Stone + Flagstaff	Manmade	boundaryPostSymbol
Structure	Flagstaff	Manmade	pointSymbol
Inland Water	Ford	Natural	waterPointSymbol
Tidal Water	Ford	Natural	waterPointSymbol
Inland Water + Structure	Fountain	Manmade	pointSymbol
Structure	Gas Governor	Manmade	pointSymbol
Historic Interest + Political Or Administrative + Structure	Boundary Post Or Stone + Guide Post	Manmade	boundaryPostSymbol
Political Or Administrative + Roadside + Structure	Boundary Post Or Stone + Guide Post	Manmade	boundaryPostSymbol
Roadside + Structure	Guide Post	Manmade	pointSymbol
Historic Interest + Roadside + Structure	Guide Post	Manmade	pointSymbol
Historic Interest + Roadside + Structure	Guide Post + Site Of Heritage	Manmade	heritageSiteOfSymbol
Inland Water	Culvert + Issues	Manmade	waterPointSymbol
Inland Water	Issues	Manmade	waterPointSymbol
Structure	Letter Box	Manmade	postboxSymbol

descriptiveGroup	descriptiveTerm	make	Style name
Structure	Mast	Manmade	pointSymbol
Historic Interest + Structure	Mast	Manmade	pointSymbol
Historic Interest + Structure	Mast + Site Of Heritage	Manmade	heritageSiteOfSymbol
Roadside + Structure	Mast	Manmade	pointSymbol
Structure	Mooring Post	Manmade	pointSymbol
Structure	Pole	Manmade	pointSymbol
Structure	Overhead Construction + Pole	Manmade	pointSymbol
Rail + Structure	Pole	Manmade	pointSymbol
Political Or Administrative + Structure	Boundary Post Or Stone + Post	Manmade	boundaryPostSymbol
Historic Interest + Political Or Administrative + Structure	Boundary Post Or Stone + Post	Manmade	boundaryPostSymbol
Structure	Post	Manmade	pointSymbol
Historic Interest + Structure	Post	Manmade	pointSymbol
Rail + Structure	Post	Manmade	pointSymbol
Roadside + Structure	Post	Manmade	pointSymbol
Historic Interest + Structure	Post + Site Of Heritage	Manmade	heritageSiteOfSymbol
Structure	Public Convenience	Manmade	pointSymbol
Structure	Public Telephone	Manmade	pointSymbol
Rail + Structure	Signal	Manmade	signalSymbol
Structure	Signal	Manmade	signalSymbol
Inland Water	Sinks	Natural	waterPointSymbol
Structure	Sluice	Manmade	waterPointSymbol
Inland Water	Spreads	Natural	waterPointSymbol
Inland Water	Culvert + Spring	Manmade	waterPointSymbol
Inland Water	Spring	Manmade	waterPointSymbol
Historic Interest + Inland Water	Spring	Natural	waterPointSymbol
Inland Water	Spring	Natural	waterPointSymbol

descriptiveGroup	descriptiveTerm	make	Style name
Historic Interest + Inland Water	Spring + Site of Heritage	Natural	heritageSiteOfSymbol
Inland Water	Static Water		waterPointSymbol
Structure	Pylon + Tank	Manmade	pointSymbol
Structure	Telecommunications Mast	Manmade	pointSymbol
Inland Water	Waterfall (vertical)	Natural	waterPointSymbol
Structure	Weir	Manmade	pointSymbol
Historic Interest + Inland Water + Structure	Site Of Heritage + Well	Manmade	heritageSiteOfSymbol
Historic Interest + Inland Water	Well	Manmade	waterPointSymbol
Inland Water + Structure	Well	Manmade	pointSymbol
Inland Water	Well	Manmade	waterPointSymbol
Historic Interest + Structure	Well	Manmade	waterPointSymbol
Structure	Well	Manmade	pointSymbol
Structure	Wind Turbine	Manmade	pointSymbol
Structure	Pylon + Wind Turbine	Manmade	pointSymbol

Cartographic style definitions

This section defines the default styles for the presentation of new descriptive terms within OS MasterMap. This specifies the colours, symbols and line styles used for visual display and printing of OS MasterMap. The styles are defined using the Scalable Vector Graphics (SVG) syntax.

Colour palette

Ordnance Survey has chosen to use colours that are consistent in the internet environment. The particular colours used are defined with both their RGB and hexadecimal values in colour palette.

The colour palette for the new descriptive terms is listed in Table 87.

Table 87: Colour palette definitions table for new descriptive terms.

	Hex (r,g,b)	Style Name
	AAD48C (170,212,140)	agriculturalLandFill
	6CC0D8 (108,193,217)	constructedWaterFill
	F5F0E1 (245,240,225)	mudFill
	F7FF82 (247,255,125)	sandFill
	B7B789 (183,184,138)	slopingMasonryFill
	D1DACD (209, 218, 205)	shingleFill

Point symbols

Point symbols are used to represent the position of particular features within the data, such as a telephone call box or bollard. The symbol represents the location and type of feature.

Point symbols are applied to the visual representation by translating them to the location of the feature they are representing and rotating them, if the orientation attribute is present, by a given amount.

The additional point symbols for the new descriptive terms are listed below:

Table 88: Point symbols table for new descriptive terms.

Symbol	Style and Geometry	Shape
caveSymbol	Style: stroke:#000000;fill:#D9D9D9;stroke-width:0.150 Geometry: <circle id="circleGeometry" r="0.375" cx="0" cy="0"/> "#circleGeometry" x="0" y="0"/>	
crossSymbol	Style: stroke:#000000; fill:none; stroke-width:0.087 Geometry: <polyline points='0.000,-0.775 0.000,0.775'/> <polyline points='-0.385,0.385 0.385,0.385'/>	
emergencyTelephoneSymbol	emergencyTelephoneSymbol Style: stroke:#FF0000;fill:#FF0000;stroke-width:0.087 Geometry: circleGeometry (see Shared symbol geometry)	
postboxSymbol	Style: stroke:#000000;fill:#FF0000;stroke-width:0.087	

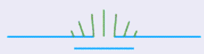
Symbol	Style and Geometry	Shape
	Geometry: circleGeometry (see Shared symbol geometry)	
signalSymbol	Style: stroke:#000000;fill:#FFAD00;stroke-width:0.087 Geometry: circleGeometry (see Shared symbol geometry)	

Fill symbols

Fill symbols are used to represent some attribution of a polygon feature and are distributed as a pattern fill across the polygon. For example, the symbol may represent information about the topographic surface such as the vegetation type.

The additional fill symbols for the new descriptive terms are listed below:

Table 89: Fill symbols table for new descriptive terms.

Symbol	Style and Geometry	Shape
collectsAndSpreadsFillSymbol	Style: stroke:#0099ff;fill:#0099ff;stroke-width:0.087 Geometry: circleFillGeometry (see [Shared symbol geometry](#))	
saltmarshFillSymbol	Style: fill:none;stroke-width:0.087 Geometry: <g style='stroke:#0099FF'> <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' /> </g> <g style='stroke:#0099FF;'> <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' /> </g>	

Symbol	Style and Geometry	Shape
sandFillSymbol	Style: stroke:#666666;fill:#666666;stroke-width:0.087 Geometry: circleFillGeometry (see Shared symbol geometry)	
reedsFillSymbol	Style: stroke:#0099FF;fill:none;stroke-width:0.087 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' />	
shingleFillSymbol	Style: stroke:#666666;fill:none;stroke-width:0.087 Geometry: <polyline points='0.215,0.103 0.081,0.541 0.317,0.811 0.756,0.98 0.992,0.743 1.161,0.44 0.992,0.305 0.823,0.068 0.655,-0.066 '/> <polyline points='0.123,-0.953 -0.317,-1.087 -0.587,-0.849 -0.754,-0.409 -0.517,-0.174 -0.212,-0.006 -0.077,-0.175 0.159,-0.345 0.293,-0.515 '/> <polyline points='-1.044,0.734 -0.871,1.058 -0.583,1.076 -0.239,0.922 -0.241,0.653 -0.317,0.386 -0.491,0.406 -0.72,0.369 -0.893,0.388 '/>	

Pattern definition

Creating a pattern

To produce a particular pattern, the appropriate fill symbol is distributed on a grid that is repeated to cover the polygon being drawn.

You can use the following grids with the new descriptive terms:

Small regular grid

Table 90: Landform grid table for new descriptive terms.

Variables	Value/s
Size	(3,3)
Suitable symbols	foreshoreFillSymbol, multiVegetationFillSymbol, collectsAndSpreadsFillSymbol
Symbol coordinates	2,2
Fill colour	foreshorePattern – DCFFBE (RGB 204,255,255) collectsAndSpreadsPattern – DCFFBE (RGB 220,255,190) sandPattern - F7FF82 (RGB 247,255,125)
Patterns	foreshorePattern multiVegetationPattern collectsAndSpreadsPattern sandPattern

Natural environment grid

Table 91: Natural environment grid table for new descriptive terms.

Variables	Value/s
Size	(50,50)
Suitable symbols	All natural vegetation and surface cover symbol types except for orchard.
Symbol coordinates	5,3 5,25 10,12 10,35 25,45 42,15 37,27 27,14 36,37 42,45 39,3 18,33
Fill colour	ccffcc (RGB 204,255,204)
Patterns	roughGrassPattern heathPattern marshPattern scatteredBouldersPattern scatteredRocksPattern scatteredConiferousTreesPattern scatteredNonconiferousTreesPattern coppicePattern

Variables	Value/s
	orchardPattern bouldersPattern rocksPattern screePattern scrubPattern coniferousTreesPattern nonconiferousTreesPattern reedsPattern saltmarshPattern shinglePattern coniferousTreesAndScatteredRocksPattern coniferousTreesAndScrubPattern heathAndScrubPattern heathAndScatteredRocksPattern nonconiferousTreesAndConiferousTreesPattern nonconiferousTreesAndCoppicePattern nonconiferousTreesAndScatteredRocksPattern nonconiferousTreesAndScrubPattern roughGrassAndBouldersPattern roughGrassAndConiferousTreesPattern roughGrassAndHeathPattern roughGrassAndMarshPattern roughGrassAndNonconiferousTreesPattern roughGrassAndRocksPattern roughGrassAndScatteredBouldersPattern roughGrassAndScatteredNonconiferousTreesPattern roughGrassAndScatteredRocksPattern roughGrassAndScrubPattern scatteredNonconiferousTreesAndScatteredConiferousTreesPattern scrubAndScatteredNonconiferousTreesPattern rocksRoughGrassAndBouldersPattern

Line styles

Line styles are used to allow a user to distinguish between different types of linear feature, for example, distinctions may be made to emphasise:

- Obstructing detail
- Non-obstructing detail
- Underground detail
- Overhead detail
- Building outlines
- Water limits and linear features
- Landform detail
- Narrow-gauge railways
- Statutory boundaries.
- Polygon-closing features

The additional lines style for the new descriptive terms are listed below:

Groyne

Table 92: Groyne (sea defence) line style table for the new descriptive terms.

Name	Attributes	Colour	Visual
seaDefenceLine	stroke-width – 0.15	B39132	

Line of Posts, Line of Mooring Posts

Table 93: Post line style table for the new descriptive terms.

Name	Attributes	Colour	Visual
postsLine	stroke-width – 0.4 stroke-dasharray – 0.1, 2.0 stroke-linecap - round	000000	