



# **OS MASTERMAP TOPOGRAPHY LAYER - CARTOGRAPHIC STYLING UPDATE FOR NEW DESCRIPTIVE TERMS**

**A guide to applying cartographic styles for new descriptive terms**

**OFFICIAL**

## Responsibility for this document

Catherine Gladstone, OS MasterMap Topography Layer Product Manager is responsible for the content of this document.

## Change history

Version	Date	Summary of change
2.0	August 2016	Second issue

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# INTRODUCTION

In the autumn of 2016, the OS MasterMap Topography Layer will be significantly enhanced with new enriched content to permit users to both style and analyse the most detailed dataset of Great Britain.

Over 70 new attribute values will be added, which will unlock a new level of visualisation and make it easier to identify, query and style individual types of landscape features, habitats, foreshore information and land cover. In total there are circa 10 million functionally enriched features that will be made available to all users of Ordnance Survey's definitive topographic data.

The introduction of these new attributes will be enabled by a schema update for OS MasterMap Topography Layer, from version 7 to [version 9](#).

The purpose of this document is to provide a guide to cartographic styling to take advantage of the new content and enable the visualisation of these new attributes. This document is an addendum to the existing [OS MasterMap Topography Layer User guide](#) and technical specification and should be used in conjunction with that document.

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## ADDENDUM TO CHAPTER 10 CARTOGRAPHIC STYLING

This addendum to the chapter provides a guide to applying styles defined in **Annexe C, Cartographic style definitions**, to Topography Layer features enriched with additional descriptive terms. Only features with new descriptive terms have been provided.

### TOPOGRAPHICAREA

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
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

descriptiveGroup	descriptiveTerm	make	Style name
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
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

descriptiveGroup	descriptiveTerm	make	Style name
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
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	Reservoir	Natural	constructedWaterFill

descriptiveGroup	descriptiveTerm	make	Style name
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 Environment + Tidal Water	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
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	Sloping Masonry	Manmade	slopingMasonryFill
Rail	Sloping Masonry	Manmade	slopingMasonryFill



descriptiveGroup	descriptiveTerm	make	Style name
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
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

descriptiveGroup	descriptiveTerm	make	Style name
Building	Well	Manmade	buildingFill
Building + Historic Interest	Well	Manmade	buildingFill
Building	Wind Turbine	Manmade	buildingFill
Structure	Wind Turbine	Manmade	structureFill

## TOPOGRAPHICLINE

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
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

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

## TOPOGRAPHICPOINT

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
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

descriptiveGroup	descriptiveTerm	make	Style name
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
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



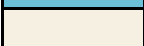
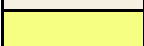


<b>descriptiveGroup</b>	<b>descriptiveTerm</b>	<b>make</b>	<b>Style name</b>
Roadside + Structure	Post	Manmade	pointSymbol
Historic Interest + Structure	Post + Site Of Heritage	Manmade	heritageSiteOfSymbol
Structure	Public Convenience	Manmade	pointSymbol
Structure	Public Telephone	Manmade	pointSymbol
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
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

## ADDENDUM TO ANNEXE C CARTOGRAPHIC STYLE DEFINITIONS

This addendum to annexe C 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. Please see colour palette for new descriptive terms below:

	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. With introduction of new descriptive term the additional symbols are:

#### 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****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

**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.

Please see fill symbols for new descriptive terms below:

### 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>
```



### 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. With introduction of new descriptive terms the following grids are in use:

#### Small regular grid

Size: (3,3)

Suitable symbols: foreshoreFillSymbol, multiVegetationFillSymbol, collectsAndSpreadsFillSymbol

Symbol coordinates: 2,2

Fill colour:       for foreshorePattern – CCFFFF (RGB 204,255,255)  
                       for collectsAndSpreadsPattern – DCFBE (RGB 220,255,190)  
                       for sandPattern - F7FF82 (RGB 247,255,125)

Patterns:         foreshorePattern  
                       multiVegetationPattern  
                       collectsAndSpreadsPattern  
                       sandPattern

#### Natural environment grid

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: dcffbe (RGB 220,255,190)

Patterns:         roughGrassPattern  
                       heathPattern  
                       marshPattern  
                       scatteredBouldersPattern  
                       scatteredRocksPattern  
                       scatteredConiferousTreesPattern  
                       scatteredNonconiferousTreesPattern  
                       coppicePattern  
                       orchardPattern  
                       bouldersPattern

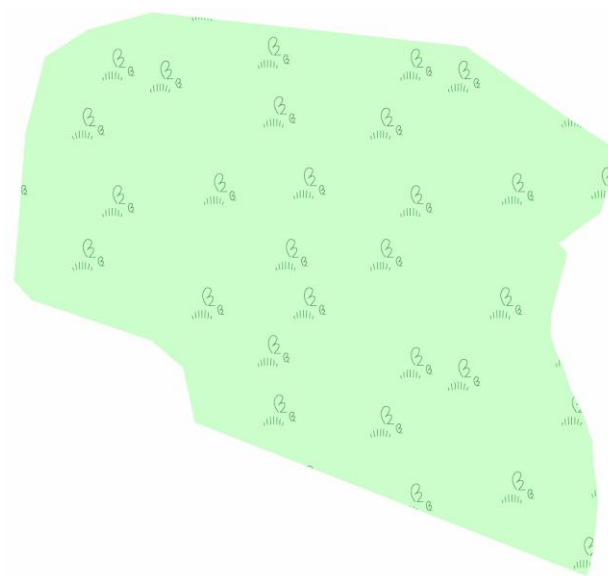
rocksPattern  
screePattern  
scrubPattern  
coniferousTreesPattern  
nonconiferousTreesPattern  
reedsPattern  
saltmarshPattern  
shinglePattern  
coniferousTreesAndScatteredRocksPattern  
coniferousTreesAndScrubPattern  
heathAndScrubPattern  
heathAndScatteredRocksPattern  
nonconiferousTreesAndConiferousTreesPattern  
nonconiferousTreesAndCoppicePattern  
nonconiferousTreesAndScatteredRocksPattern  
nonconiferousTreesAndScrubPattern  
roughGrassAndBouldersPattern  
roughGrassAndConiferousTreesPattern  
roughGrassAndHeathPattern  
roughGrassAndMarshPattern  
roughGrassAndNonconiferousTreesPattern  
roughGrassAndRocksPattern  
roughGrassAndScatteredBouldersPattern  
roughGrassAndScatteredNonconiferousTreesPattern  
roughGrassAndScatteredRocksPattern  
roughGrassAndScrubPattern  
scatteredNonconiferousTreesAndScatteredConiferousTreesPattern  
scrubAndScatteredNonconiferousTreesPattern  
rocksRoughGrassAndBouldersPattern  
roughGrassNonconiferousTreesAndConiferousTreesPattern  
roughGrassNonconiferousTreesAndScrubPattern  
roughGrassScatteredRocksAndBouldersPattern  
roughGrassScatteredRocksAndHeathPattern  
roughGrassScatteredRocksAndScatteredBouldersPattern  
roughGrassScatteredNonconiferousTreesAndScrubPattern  
scrubConiferousTreesAndNonconiferousTreesPattern  
scrubNonconiferousTreesAndCoppicePattern  
scatteredConiferousTreesScatteredNonconiferousTreesAndScrubPattern

## Example

For example, the heathAndScrubPattern uses the natural environment grid to produce the pattern below:



This is then applied as a polygon fill:



## 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

By introducing new descriptive terms additional lines style are:

### Groyne



Name – seaDefenceLine

stroke: #B39132 stroke-width – 0.15

### Line of Posts, Line of Mooring Posts



Name – postsLine

stroke-width – 0.4

stroke-dasharray – 0.1, 2.0

stroke-linecap - round