

DNF themes

DNF release 1 product data: Principles and rules used to assign DNF features to themes.

DNF release 1

Responsibility for this document

Ordnance Survey DNF Business Manager is responsible for the content of this document.

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1 Principles of DNF themes

1.1 What is a theme?

A theme is a fixed set of features that can be collectively selected for supply by users. A feature can be a member of any number of themes. All features supplied in the product belong to at least one theme.

A theme is created by applying rules based on the attributes of DNF features. For instance, the rule for membership of the water theme is that the descriptive group attribute of the feature must be one of Tidal Water, or Inland Water. A theme rule can put conditions on more than one feature attribute. A feature is a member of every theme for which it passes the theme rules.

Themes are not part of the classification system of DNF features. A new theme can be created for the convenience of users, without in any way affecting either the existing themes, or the classification of DNF features.

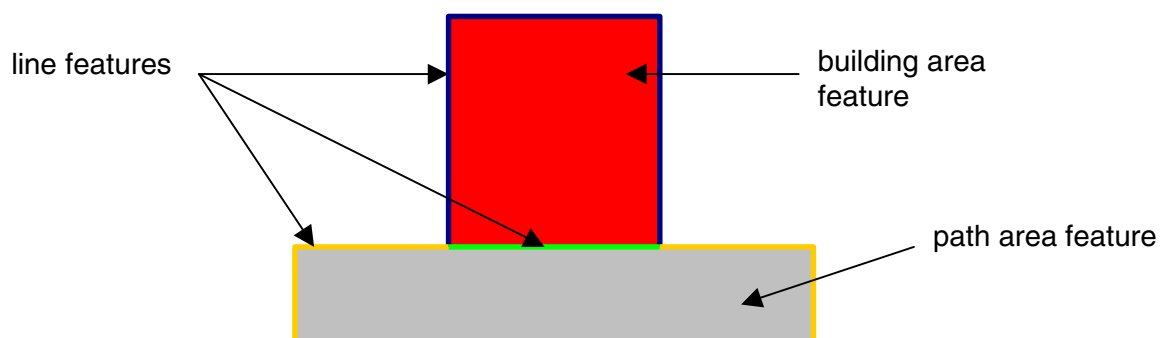
The themes to which a feature belongs are given as attributes of the feature in DNF data.

1.2 Themeing of line features which bound area features

In addition to being a member of each theme for which it passes the theme rule, a DNF line feature which is the boundary of DNF area features is also a member of the themes of those area features. So any line feature which bounds an area feature which is a member of the 'Roads, tracks and paths' theme, is also a member of the Roads, tracks and paths theme, in addition to any other themes it belongs to.

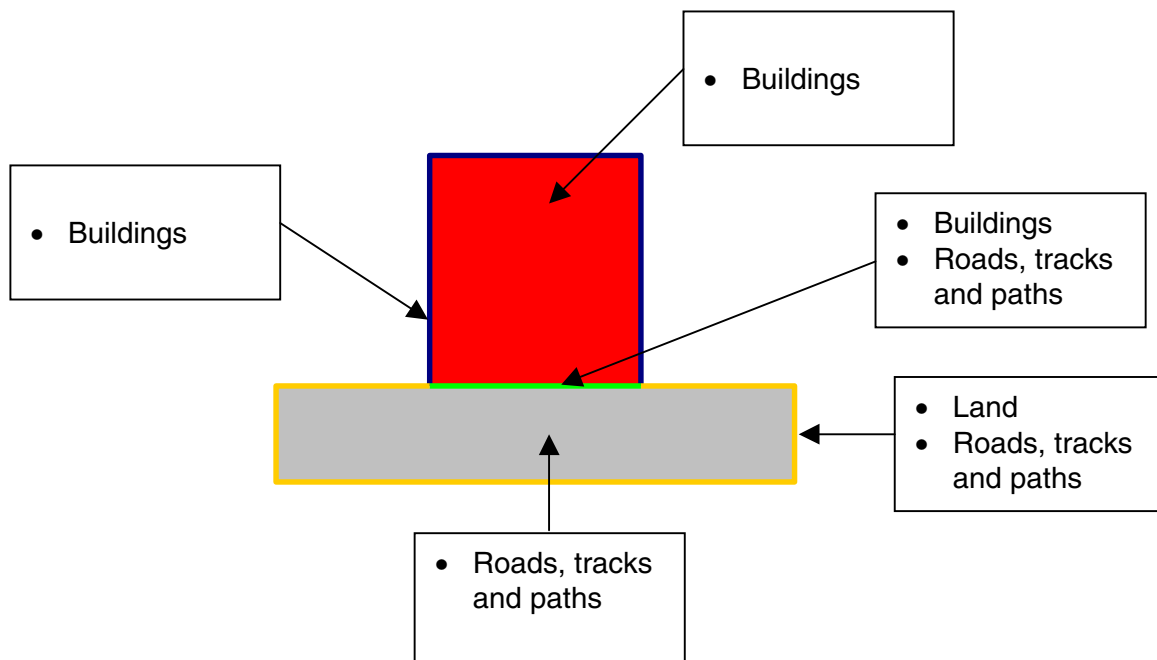
1.3 Simple example of themeing

Consider two area features representing a building (coloured red in the diagram) and a section of pavement (coloured grey in the diagram). They are bounded by three line features, coloured blue, green and orange in the diagram.



Application of the theming rules:

1. The area feature representing the building has a descriptive group attribute with the value Building so it passes the rule to be a member of the Buildings theme. It does not pass the rules of any other themes.
2. The area feature representing the pavement has a descriptive group attribute with the value Path so it passes the rule to be a member of the Roads, tracks and paths theme. It does not pass the rules of any other themes.
3. The two line features coloured blue and green in the diagram have a descriptive group attribute with the value Building so they pass the rule to be members of the Buildings theme. They do not pass the rules of any other themes.
4. The line feature coloured orange in the diagram has a descriptive group attribute with value General so it passes the rule to be a member of the Land theme. It does not pass the rules of any other themes.
5. The three line features are then placed in the themes of which the area features they bound are members, giving the final assignment of features to themes shown in the diagram below.



2 Theme definitions

2.1 Administrative boundaries theme

2.1.1 Description

The limits of responsibility and representation defined for electoral and administrative purposes.

2.1.2 Theme rule

Descriptive group = 'Political Or Administrative'

2.1.3 Examples

Euro, county, district, ward and civil parish boundaries. Boundary stones and boundary mereing symbols.

2.2 Buildings theme

2.2.1 Description

Roofed constructions, usually walled. Includes permanent roofed constructions that exceed 8.0 m² in area (12 m² in private gardens). Exceptions are made for smaller buildings in such a detached position that they form relatively important topographical features. Mobile homes, residential caravans and so on are not captured. Storage tanks may be classified as buildings.

2.2.2 Theme rule

Descriptive group = Building, Glasshouse or 'Building Or Structure'

2.2.3 Examples

Barns, private houses, factories, schools.

2.3 Heritage and antiquities theme

2.3.1 Description

Features and cartography which depict sites or constructions of historic interest.

This theme is currently very limited in content.

2.3.2 Theme rule

Descriptive group = Historic Interest

2.3.3 Examples

Text Site of, Hadrians Wall, and so on.

2.4 Water theme

2.4.1 Description

Features that contain, delimit or relate to real world objects containing water.

2.4.2 Theme rule

Descriptive group = Tidal Water or Inland Water

2.4.3 Examples

Streams, lakes, rivers, tide lines and canals.

2.5 Land theme

2.5.1 Description

Man-made and natural features that delimit and describe the surface cover other than communication routes and buildings. This also includes all features relating to manmade and natural slope and cliff. All General features are also placed in the land theme.

Features with a descriptive group of Landform are not topologically structured with the other features in the theme. This means that landform line features cross other line features without being broken at intersections, and landform area features overlap other area features.

2.5.2 Theme rule

Descriptive group = General Surface, General Features, Landform, Built Environment, Natural Environment or Provisional Or Unverified.

2.5.3 Examples

Residential land, car parks, agricultural land, slopes, cliffs and quarries.

2.6 Rail theme

2.6.1 Description

Features related to travel by railway or tramway. All features that have been identified as part of the rail network. Currently railway tunnels are not classified as railway and so will be present in the Structures theme.

2.6.2 Theme rule

Descriptive group = Rail

2.6.3 Examples

Rail alignments, permanent way and railway land

2.7 Roads, tracks and paths theme

2.7.1 Description

Features related to transport by vehicles, cycles or pedestrians

This includes features that are road, made paths or text classified as road, track or path related. All tracks and unmade paths are not currently classified as such and so will be available in the Land theme. Road tunnels are not classified as related to roads and so will be present in the Structures theme.

Roads: Metalled communication routes usable by ordinary vehicles, that is, not those especially adapted for cross country travel. Typical examples of metalling include tarmac, concrete, gravel, cinder and must constitute a specific and systematic improvement to allow the passage of vehicles for features to be described as a road. Both public and non-public roads are captured and identified.

Tracks: Non-metalled communications routes including those utilised by agricultural and other especially adapted vehicles. Exposure of underlying subsurface materials through erosion by vehicular traffic and the intermittent application of metalling to features that are predominantly tracks does not constitute a feature that should be described as a road.

Paths: Metalled or non-metalled communication routes for use by cyclists or pedestrians. Unmade paths are those without metalling and are only captured when they are continuous between identifiable points.

2.7.2 Theme rule

Descriptive group = Roadside, 'Road Or Track' or Path

2.7.3 Examples

Road section, roundabouts, central reservations, cycle paths.

2.8 Structures theme

2.8.1 Description

Man-made constructions that are not buildings. These may or may not obstruct passage at ground level.

2.8.2 Theme rule

Descriptive group = Structure

2.8.3 Examples

Chimneys, pylons, masts, bridges, gantries and tunnels.

2.9 Terrain and height theme

2.9.1 Description

All current height information included in DNF defining ground level. This is currently very limited.

2.9.2 Theme rule

Features which have the optional property HeightAboveDatum; or

Descriptive group = 'Terrain And Height', or Height Control

2.9.3 Examples

Spot heights, tide lines and bench marks.

