

**PRODUCT DESCRIPTION**

# Topography 50 Download, vector

DOCUMENT VERSION: 1.9

*Figure 1 Section from Topography 50 Download, vector*



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**APPENDIX 1 LANTMÄTERIET'S COVERAGE AREA FOR MOUNTAIN RANGE INFORMATION 118**

## I General description

### I.1 Contents

This document describes how Topography 50 Download, vector is structured at delivery. The contents are well suited for graphical presentation in the scale area 1:15 000 – 1:50 000.

Topography 50 Download, vector is based on Lantmäteriet's basic geographic databases, where information has been collected with varying quality concerning positional uncertainty, contents, and update frequency. The information has then been generalised automatically to fit into the scale area for Topography 50 Download, vector.

Topography 50 Download, vector contains, among other things, buildings, land cover types, roads, and hydrography.

Topography 50 Download, vector contains Lantmäteriet's reviewed and established names that are included in the Place Names Register.

### I.2 Geographic coverage

Nationwide.

### I.3 Coordinate system

Plane: SWEREF 99 TM

Height: RH 2000

For information on what other coordinate systems the product can be delivered in, refer to the document [Avgifter och leveransinformation för Lantmäteriets geodata \(pdf, in Swedish\)](#) about fees and delivery information for Lantmäteriet geodata on Lantmäteriet's website.

## 2 Quality description

### 2.1 Purpose and utility

Topography 50 Download, vector intended for users who are navigating outdoors and orienting themselves using the map.

The product provides a good representation of terrain, height conditions, watercourses, infrastructure, and larger buildings. Mountain information is also included.

The vector format allows you to tailor the map to customize the map to your own business needs.

You can:

- add and link your own information to objects on the map.
- integrate map information in your own system.
- display information as required using the layer division.

## 2.2 Data capture

### 2.2.1 LINEAGE

The predecessor to Topography 50 Download, vector was GSD Terrain map, which was initiated in 1988. The content of the Terrain Map was initially designed for a printed map, but the data was also used for other products in vector and raster formats.

In conjunction with a transition to a new automated production method, a review of the structure and content was conducted to suit new applications and enable automation. The content was simultaneously given a data model that harmonizes with Topography 10 Download, Vector and the new product Topography 50 Download, Vector.

The content in Topography 50 Download, vector is produced through automatic generalization of the basic dataset included in Topography 10 Download, Vector. The automatic generalization process (AG-process) consists of a series of GIS operations that step by step process the data to be suitable for presentation in a general map scale. The content is partly restructured, some map objects are merged or removed and sometimes they are exaggerated in size or moved apart. This is done to create a dataset that is cartographically adjusted for screen display in scale 1:15,000 – 1:50,000 and for printing or print in scale 1:50,000.

The text consists of place names and informational text. Place names are decided by Lantmäteriet and has earlier been collected through field work. Today a significant part of the collection of place names is done through collaboration between authorities or municipalities. Place names can also be established by the government, county administrative board or municipality. These place names are reviewed by Lantmäteriet's place name section before publication.

Informational text aim to provide users with more information about phenomena of general interest. These texts were previously collected through fieldwork and later updated as needed through collaboration with municipalities.

Changes in administrative units occur based on decisions by authorities. Contour lines are generated from the National Elevation Database. The cultural-historical remains presented has been added through selection from the Swedish National Heritage Board (RAÄ).

## 2.3 Maintenance

The automatic generalization process runs in subareas that are square and in most cases with a side length of 10 km, known as index squares 10x10 km. The process is initiated when any changes occur in the basic data, which could be significant for Topography 50 Download, vector.

In the AG process, new data for Topography 50 Download, vector is generated within the relevant index square, i.e., the entire dataset in the subarea is

updated, not just the changed objects. Input to the process is basic data, and the result is updated data for Topography 50 Download, vector. In a post-processing step, objects at the edges of adjacent index squares are adjusted to each other, and larger objects that touch multiple index squares are merged.

There are some exceptions from the automatic processing method. Text and Administrative units are updated manually. Contour lines are generated from the national elevation database. Cultural-historical remains are not updated.

### **2.3.1 MAINTENANCE FREQUENCY**

Topography 50 Download, vector is updated once a week for the index squares that are affected by changes. For each object, the date of storage in the database is specified.

Text and Contour lines are updated regularly, at least once a year. Administrative units are updated annually. Cultural-historical remains are not updated.

## **2.4 Data quality**

### **2.4.1 COMPLETENESS**

Completeness is related to the selection for each object type. There are also certain generalization rules for the information, which means that not all objects are represented on the map.

Elevation points are only available in the coverage area of the previous product GSD-Terrain map, as well as within the coverage area of Lantmäteriet's mountain range information, i.e., elevation points are missing in certain parts of the inland of Norrland.

Cultural heritage remains are only available in the coverage area of the previous product GSD-Terrain map, i.e., cultural heritage remains are missing in certain parts of the inland and mountain areas of Norrland.

### **2.4.2 LOGICAL CONSISTENCY**

For point, line, and polygon object structure the goal is to enable easy topology creation. However, deviations can occur.

Checks are performed to ensure that only valid value ranges and object types are inserted into the database.

### **2.4.3 THEMATIC ACCURACY**

The thematic classification of topographic data is based on the classification in basic data for Topography 10 Download, vector.

### **2.4.4 POSITIONAL UNCERTAINTY**

Positional uncertainty describes how well a given position corresponds to the actual position in the terrain. Information on positional uncertainty

depends on the measurement method, generalization and how distinct the object is. Concrete objects normally have lower positional uncertainty than diffuse objects.

Most of the content in Topography 50 Download, vector is generated based on basic data collected for Topography 10 Download, vector and therefore there is a certain relationship between positional uncertainty for different object types in basic data and Topography 50 Download, vector. The generalization applied to Topography 50 Download, vector results in increased positional uncertainty. For example, objects can be moved in position due to limited space in the map image. Objects with too detailed geometry is simplified and multiple closely spaced line objects can be represented as a single line (e.g., centre line for roads with separate lanes or double track for rail traffic).

Shorelines and watercourses are objects that generally are not significantly affected by the cartographic generalization and therefore have low positional uncertainty.

Point symbols are generally more affected by cartographic generalization and therefore have a higher positional uncertainty. For example, facility area points, building points, mountain point of interest, nature conservation points and road points.

Administrative units have a low positional uncertainty.

Cultural-historical remains have a high positional uncertainty.

### **3 Contents of the delivery**

#### **3.1 Folder structure at delivery**

The files delivered are Geopackage files with containing data, and a JSON-file with a description of the contents of the data file.

The Geopackage files can be ordered from Geotorget.

Other files for styling and symbols are available for download on the [product page](#).

#### **3.2 Delivery format**

The information is delivered in the [Geopackage](#) format.

#### **3.3 File sets**

The information is delivered in a gpkg file, and a description of the data content is delivered in a json file.

#### **3.4 Layering**

In the delivery of Topography 50 Download, vector, the information is divided into different themes, where each theme is delivered in a Geopackage file, containing several layers.

The layer names are based on the theme, object, and geometry type.

The layer names begin with the theme and extent before the layer name when imported into software.

Example: **kommunikation\_In21 ralstrafik** for county-level extraction

Exempel: **kommunikation\_sverige ralstrafik** for national-level extraction

The attribute set varies between the different layers and is described in detail in Chapter 5.

## 4 Layout and plotting of data

### 4.1 Distribution

The theme for land is divided into 10 km grids to improve the drawing performance, when plotting the data.

### 4.2 On-screen presentation

The styling of the vector product has been performed in scale 1:25,000. Therefore, this scale can be considered suitable for the on-screen presentation of vector styling.

For styling, a LYR file is provided for ArcGIS/ArcMap and a LYRX file for ArcGIS Pro. In ArcGIS/ArcMap, data should be saved in a geodatabase to achieve full functionality.

For QGIS, a QLR file is provided for styling.

The styling files contain a proposed drawing order for the layers.

Symbols specific to Lantmäteriet's data are provided in a symbol file, LMTopografisymboler.ttf.

The styling file and symbol file are available for download on the [product page](#).

#### 4.2.1 TEXT

When plotting text, the attribute **textkategori** determines the style and colour, while **textstorleksklass** determines the size. Other attributes used are **textriktning** (orientation). Text strings are not drawn with spaced characters. This is only indicated in the attribute **textsparrning** as a percentage of how much the delivered text represents in relation to the original text. Refer to table 122 for recommended font size of the text.

### 4.3 Installation of fonts

The text in the styling file uses the Window's standard font, Arial.



### 4.3.1 SYMBOLS

Regardless of which software is being used, the included font in the file LMTopografisymboler.ttf must be installed in the Windows font catalogue (c:\\Windows\\Fonts), to obtain a correct symbol presentation.

During symbol styling, the attribute rotation has been used to obtain a correct symbol orientation.

## 5 Layer description and code list

### 5.1 Administrative unit

Table 1. Layers part of Administrative unit

Administrative unit	Layer name
Administrative boundary	administrativ_grans
Boundary marker	riksrose

#### 5.1.1 ADMINISTRATIVE BOUNDARY

Table 2. Content in Administrative boundary (Layer name: administrativ\_grans)

Object type	Object type number	Definition	Description	Comment
Territorial waters boundary	1561	Sweden's territorial waters boundary towards the free ocean or other nation's sea territory	<p>The territorial waters include internal waters and territorial sea. Internal waters include water areas on land and in the sea inside the national border and baselines. The territorial sea extends 12 nautical miles from the baselines.</p> <p>The baselines are drawn along a low water line along the coast at the level of 0.5 meters.</p> <p>Presented according to the law (2017:1272) about Sweden's sea territory and maritime zones.</p>	<i>The territorial waters boundary at the Finnish border in the Bothnian sea and in Åland's ocean, at the border against Denmark in Öresund as well as the border against Norway in Svinesund, is presented as National boundary.</i>

Object type	Object type number	Definition	Description	Comment
National boundary	1562	boundary between two nations	The boundary also serves as county, municipality, district, and real property boundary.	
County boundary	1563	boundary for a geographically delimited area that constitutes an administrative unit directly under the state	County and municipality boundaries in public waters are established by The Legal, Financial and Administrative Services Agency (Kammarkollegiet).  that constitutes an administrative unit directly subordinate to the state.	
Municipality boundary	1564	boundary for geographically delimited area constituting an administrative unit with its own board and taxation right	Also serves as a register area in the real property register according to the real property register announcement. County and municipality boundaries in public waters are established by The Legal, Financial and Administrative Services Agency (Kammarkollegiet).	
Cultivation boundary	1565	administrative boundary of importance for the practice of reindeer husbandry rights	Administrative determined boundary between mountain regions and areas suitable for cultivation in Norrbotten and Västerbotten counties. The cultivation boundary is regulated in the Reindeer Husbandry Act (SFS 1971:437).	Completely included.

Table 3. Set of attributes for Administrative boundary

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates that the type is Administrative boundary	The object type is Administrative boundary

### 5.1.2 NATIONAL BOUNDARY MARKER

Table 4. Contents in National boundary marker (Layer name: riksrose)

Object type	Object type number	Definition	Description	Comment
National boundary marker	5121	marking on land for the location of the national boundary	Can also exist on land for the national boundary's location in water. To a boundary marker there must always be a national boundary connected.	

Table 5. Set of attributes for Boundary marker.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	Indicates that the type is boundary marker	The object type is <i>Boundary marker</i>

Attribute	Type	Length	Definition	Description
beteckning	Text	64	Unique designation that consists of Rr together with a combination of numbers, roman numerals and/or letters.	Example: Rr II, Rr 63, Rr H, Rr Kca, Rr Ca, Rr M 12
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

## 5.2 Facility area

Table 6. Included layers in Facility area theme.

Facility area	Layer name
Facility area (polygon)	anlaggningsomrade
Facility area point	anlaggningsomradespunkt
Runway (polygon)	start_landningsbana
Airport area (polygon)	flygplatsomrade
Airport point	flygplatspunkt

### 5.2.1 FACILITY AREA (POLYGON)

Table 7. Contents in Facility area (Layer name: anlaggningsomrade)

Object type	Object type number	Definition	Description	Comment
Industrial area	2831	a facility area primarily used for industrial activities.		Minimum area mapped for energy production, mining, test field and quarry is 10,000 square metres (1 ha). Minimum area

Object type	Object type number	Definition	Description	Comment
				<p>mapped for reindeer enclosure is 2,000 square metres.</p> <p><i>Industrial area, unspecified</i> is used for larger facilities to keep the area together and where it is not adjacent to a locality.</p> <p>Unspecified areas larger than 100,000 square metres (10 hectares) are mapped.</p> <p>Areas of 30,000-100,000 square meters (3-10 hectares) are mapped if they are mostly undeveloped.</p> <p><i>Industrial area, unspecified</i> is not included when the area coincides with an industrial- and retail area in the layer <i>Land cover</i>.</p>
Community function	2832	facility area used for socially beneficial activities		Minimum area mapped is 10,000 square metres (1 hectares).
Recreation	2833	facility area primarily used for activities related to sport, leisure, or culture		Minimum area mapped is 10,000 square metres (1 hectares).
Civil firing range	2834	a restricted area where civilian		Minimum area mapped is 10,000

Object type	Object type number	Definition	Description	Comment
		dangerous, such as firing with live ammunition, detonations, or rocket launching are regularly conducted		square metres (1 hectares). Example: Bofors test centre, Vidsel test range, Esrange rocket shooting field, torpedo shooting field in Vättern.

Table 8. Set of attributes for Facility area

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates type of facility area	Value range describes valid values.
andamal	Text	255	States activity	See value range for industrial area purpose, community function purpose and recreation purpose below.
skjutfaltstyp	Text	255	type of firing range	Value range for valid firing range types. Valid only for the object type <i>Civil firing range</i> .  See value range <i>Firing range type</i> .

Attribute	Type	Length	Definition	Description
skjutfaltstext	Text	100	informative text for firing range	Valid only for the object type <i>Civil firing range</i> .

Table 9. Value range for Industrial area purposes

Value	Definition	Description	Comment
Energiproduktion ( <i>Energy production</i> )	transformation of energy source to electricity or heating		Example: Biogas plant, oil power plant, power heating plant, natural gas, solar cell park, wave power plant, heating plant, nuclear power plant.
Gruvområde ( <i>Mining area</i> )	area where mining activities take place	Also includes sludge reservoirs and land with facilities for the mining operations.	Mapped if the mining facility is in use.
Rengärde ( <i>Reindeer enclosure</i> )	enclosure intended to be used during separation and slaughter or calf marking of reindeers		Mapped if the reindeer enclosure is in use. Abandoned reindeer enclosures are mapped if there is a stone wall around it. Reindeer enclosure is presented within the coverage area for Lantmäteriet's mountain range information.
Testbana ( <i>Test track</i> )	testing facility for motor vehicles		
Täkt ( <i>Quarry</i> )	facility area where stone, gravel, or peat is extracted		Example: Mountain quarry, gravel pit or peatery.
Ospecificerad ( <i>Unspecified</i> )	unspecified industrial activity		

Table 10. Value range for Community function area purpose

Value	Definition	Description	Comment
Avfallsanläggning (Waste facility)	area for reception of waste		Car dismantling, landfill and recycling central are mapped. Recycling station is not included.
Begravningsplats (Cemetery)	area used for the storage of the remains or ashes of the deceased		Example: Cemetery, funeral place, or memorial grove.
Civilt övningsfält (Civil practice field)	area used for training and education in the field of rescue, safety, and emergency preparedness	Used for e.g., rescue services, police, and ambulance care.	The Rescue Services practice field are mapped.
Kriminalvårdsanstalt (Prison)	fenced area for the enforcement of prison sentences		
Sjukhusområde (Hospital area)	area with a hospital or other healthcare institution	In the area, there is at least one workplace with 350 employees within healthcare sectors, and typically a larger hospital building.	According to Statistics Sweden's definition, a workplace refers to each address, property, or group of properties where the company conducts its operations.  This includes the 99 largest hospital areas in Sweden in 2023. This may change depending on factors such as maintenance and updates.
Skolområde (School area)	school buildings with attached grounds	School areas for pre-school class, compulsory school, special school, private school, Sami school, upper secondary school, University areas.	Statistics Sweden is responsible for the collection of areas for preschool class, compulsory school, and Sami school. Statistics Sweden is responsible for points for private school, upper secondary school.



Value	Definition	Description	Comment
			Based on these points, Lantmäteriet creates polygons. Statistics Sweden provides data for university areas. The areas have, if necessary, been edited and supplemented by Lantmäteriet, with the support of orthophotos and map data (as well as, where applicable, the school's website and street view on the Internet).  Example: Schoolyard, campus
Trafikövningsplats <i>(Traffic training area)</i>	pecially prepared road course for training in manoeuvring and slippery driving, e.g., as part of a driver's licence training	Also called slippery course.	
Ospecificerad <i>(Unspecified)</i>	unspecified community activities.		

Table 11. Value range for Recreation purpose

Value	Definition	Description	Comment
Aktivitetspark <i>(Activity Park)</i>	prepared outside area with several types of activities for training, playing and sports	Clearly defined area. Not mapped separately if it is included in another facility area. Private activity parks on private plots are not mapped.	Example: Skatepark, larger playground, outdoor gym, obstacle course, pump track.
Besökspark <i>(Visitor Park)</i>	usually fenced in park with entry fees visited for leisure and experiences		Example: Astrid Lindgrens World, Gröna Lund or Kolmården zoo.
Golfbana <i>(Golf course)</i>	prepared area for golf		A nine-hole course and larger.

Value	Definition	Description	Comment
Koloniområde ( <i>Allotment area</i> )	area for gardening and cultivation activities in the form of allotment garden and/or cultivation plots	An allotment garden can be built with an allotment cottage and a basic greenhouse.  A cultivation plot is primarily intended for the cultivation of vegetables, fruit, berries, and flowers. There may also be a small shed on the cultivation plot.	
Kulturanläggning ( <i>Culture facility</i> )	area to show various cultural interpretations		Examples: Open-air Museum, local heritage museum, or cultural village
Motorsportanläggning ( <i>Motorsport facility</i> )	prepared area for motor sports		Example: Motocross track.
Vintersportanläggning ( <i>Winter sports facility</i> )	prepared area for winter sports		Examples: Ski jumping slope, alpine skiing facility, ski stadium, bobsleigh- and luge course.
Ospecificerad ( <i>Unspecified</i> )	unspecified recreation purpose		

Table 12. Value range for Firing range type.

Value	Definition
Skjutfält (Firing range)	Firing range on land
Skjutområde (Firing area)	Firing range on water

## 5.2.2 FACILITY AREA POINT

Table 13. Contents in Facility area point (Layer name: anlaggningsomradespunkt)

Object type	Object type number	Definition	Description	Comment
Industrial area, point	2841	a facility area represented by a point primarily used for industrial activities		
Community function, point	2842	facility area, represented by a point, used for public contexts		
Recreation, point	2843	facility area represented by a point, primarily used for activities related to sport, leisure, or culture		Running track outside a larger facility is mapped as sports facility if it is larger than 1000 square meters.
Sports field, point	2844	delimited and prepared field or course, represented with a point, where sports or athletic activities take place	Often has standardized measurements.	A field or course inside a larger facility is also included. For <i>Football field</i> and <i>Ball field</i> the minimum area mapped is 5,000 square meters.

Table 14. Set of attributes for Facility area point

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	

Attribute	Type	Length	Definition	Description
objekttyp	Text	255	indicates type of facility point	Value range describes valid values.
andamal	Text	255	states facility	See value range Industrial purpose, Community function purpose, Recreation purpose and Sports field purpose below.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

Table 15. Value range Industrial purposes

Value	Definition	Description	Comment
Hamn (Harbour)	area, where ships can anchor and moor, meant for protection, loading, unloading and storage		Editorial collection takes information from the Swedish Maritime Administration's port register. Guest harbour is not included but is instead presented as <i>Guest harbour</i> . Examples: Fishing harbour, industrial harbour.

Table 16. Value range Community function purposes

Value	Definition	Description	Comment
Sjöräddningsstation (Sea rescue station)	rescue station with a stationed sea rescue unit	The stations are operated by the Swedish Sea Rescue Society.	

Table 17. Value range Recreation purposes

Value	Definition	Description	Comment
Badplats (Swimming area)	swimming pool or nature swimming with prepared services	facilities provided such as a bathing jetty, lifebuoy, and toilet	
Campingplats (Camp site)	prepared area for overnight stays in a cabin, camper van, motor home or tent with attached services		All camp sites listed in the following designations should be included: - The Swedish Camping Association <a href="http://www.scr.se">www.scr.se</a> - Independent campsites in Sweden <a href="http://www.husvagnochcamping.se">www.husvagnochcamping.se</a> - Caravan Club <a href="http://www.caravanclub.se">www.caravanclub.se</a>  In addition, camp sites collected with municipalities are also included.
Gästhamn (Guest harbour)	harbour (marina) prepared with boat berths, available for temporary visiting recreational boats for a fee	Editorial collection from: - The Guest Harbour guide (Gästhamnsguiden) - Swedish Guest Harbours (Svenska Gästhamnar)  In addition to these, guest harbours collected in collaboration with the municipalities are also mapped.	
Idrottsanläggning (Sports facility)	larger sports and athletics facility (sports field)		
Småbåtshamn (Small boat harbour)	harbour (marina) prepared for mooring of leisure boats		

Table 18. Value range for Sports field purposes

Value	Definition	Description	Comment
Bollplan (Ball field)	field for ball games		Examples: American football, baseball, soft ball, cricket, lacrosse, field hockey, rugby, basketball, beach volleyball, beach handball, multi-purpose field, padel.
Fotbollsplan (Football field)	field prepared for football		All fields where organized football activities take place. Boundary lines should be clearly visible. Smaller ball fields at schools are not included.
Galoppbana (Gallop race-course)	racecourse prepared for gallop competitions.		Main courses according to <a href="#">Svensk galopp</a> . Examples: Göteborg, Jägersro, Bro Park
Travbana (Trotting race-course)	racecourse prepared for trotting competitions		Selection according to <a href="http://www.travsport.se">www.travsport.se</a>
Skjutbana (Shooting range)	prepared range for training or competition in shooting		A permanent range which is at least 300 m long. Examples: Shooting range for rifle, field shooting or automatic weapon as well as longer hunting shooting range.
Skjutbana, mindre (Shooting range, smaller)	smaller prepared range for training or competition in shooting		A permanent range. Examples: Hunting shooting, pistol, larger bow shooting and clay pigeon course.

### 5.2.3 AIRPORT AREA

Table 19. Content in Airport area (Layer name: flygplatsomrade)

Object type	Object type number	Definition	Description	Comment
Airport area	2854	facility area for departure and arrival by aviation	The facility area includes runways as well as buildings, parking spaces and other facilities related to the airport.	Aviation activities conducted according to the list AIP, published by Air Navigation Services of Sweden, is mapped. The Air Force's flotilla and training airfields are part of AIP. Aviation without any official status (e.g., flight clubs) can also occur, but not model airplanes or seaplanes.

Table 20. Set of attributes for Airport area

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	States that the type is airport area	The object type is Airport area.
iata	Text	3	three-digit identification code for airports	IATA-codes are only available for airports with regular flights, for example, ARN – Stockholm Arlanda Airport.
icao	Text	4	four-lettered code of the geographic position of airports, only	ICAO-codes are available both for airports with

Attribute	Type	Length	Definition	Description
			used by pilots and air traffic control	regular flights as well as small airports with only private aviation, for example, ESSB (Europe Sweden Stockholm Bromma).

#### 5.2.4 AIRPORT POINT

Table 21. Contents in Airport point (Layer name: flygplatspunkt)

Object type	Object type number	Definition	Description	Comment
Helicopter pad	2852	designated spot from which air traffic or helicopter traffic originates	Helicopter pads normally have one or more helicopter landing pads and may have limited infrastructure such as fuel stations, hangars, and workshops.	They are mapped if they are licensed by the Swedish Transport Agency (Luftfartsverket) according to AIP, except for within the coverage area of the Lantmäteriet's mountain range information where all helicopter landing sites are mapped.

Table 22. Set of attributes for Airport point

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	States type of airport point	Value range described valid values.



Attribute	Type	Length	Definition	Description
iata	Text	3	three-digit identification code for airports	IATA-codes are only available for airports with regular flights, for example, ARN – Stockholm Arlanda Airport.
icao	Text	4	four-lettered code of the geographic position of airports, only used by pilots and air traffic control	ICAO-codes are available both for airports with regular flights as well as small airports with only private aviation, for example, ESSB (Europe Sweden Stockholm Bromma).
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

### 5.2.5 RUNWAY

Table 23. Contents in Runway (Layer name: start\_landningsbana)

Object type	Object type number	Definition	Description	Comment
Runway	2853	prepared surface for take-off and landing of airplanes	Runway within an airport.	Runways within mapped airport areas. Also mapped for former airports. Taxiways are not included.

Table 24. Set of attributes for Runway (Layer name: start\_landningsbana)

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	states that the type is runway	A text value that should always be runway.
flygplatsstatus	Text	255	states if the airport is operational or closed	See value quantity for Airport status.

Table 25. Value range for Airport status

Value	Definition
I drift (Operational)	the airport is operational
Nedlagd (Closed)	the airport is closed

### 5.3 Structures

Table 26. Included layers in the Structures theme.

Structures	Layer name
Building (polygon)	byggnad
Building facility line	byggnadsanlaggningslinje
Building facility point	byggnadsanlaggningspunkt
Building point	byggnadspunkt

### 5.3.1 BUILDING (POLYGON)

Table 27. Contents in Building (polygon) (Layer name: byggnad)

Object type	Object type number	Definition	Description	Comment
Residential	2061	building primarily used for leisure or permanent accommodation		Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also applicable inside industrial areas.
Industrial	2062	building primarily used for manufacturing products and processing of raw materials		Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All

Object type	Object type number	Definition	Description	Comment
				buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also applicable inside industrial areas.
Public	2063	building primarily used for citizens' activities in community life		Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also applicable inside industrial areas.
Commercial	2064	building primarily used for commercial purposes		Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's

Object type	Object type number	Definition	Description	Comment
				<p>shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also applicable inside industrial areas.</p>
Agricultural	2065	building primarily used for agricultural, forestry, or comparable industry		<p>Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also</p>

Object type	Object type number	Definition	Description	Comment
				applicable inside industrial areas.
Accessory building	2066	<i>Building</i> that obviously belongs to other buildings with the purpose residence, public function, commercial or industrial		Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also applicable inside industrial areas.
Other building	2067	building whose purpose is <u>not</u> <i>Residential, Industrial, Public, Commercial, Agricultural or Accessory building</i>		Used outside built-up areas for large buildings. The minimum measurement varies depending on the building's shape but all buildings larger than 1250 square metres are mapped. Within industrial areas buildings larger than 2000 square meters are mapped. All

Object type	Object type number	Definition	Description	Comment
				buildings with round shape from 400 square meters are mapped. Also, single round building down to 120 square meters can occur in areas with few buildings. This is also applicable inside industrial areas.

Table 28. Set of attributes for Building

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of building	Range of values for valid values.

### 5.3.2 BUILDING FACILITY LINE

Table 29. Contents in Building facility line (Layer name: byggnadsanlaggningslinje)

Object type	Object type number	Definition	Description	Comment
Cable traffic	1978	wire-borne transportation system with carriages, baskets, loops, sticks or harness that run above ground level	Cable cars and ski lifts.	Mapped if it is operating and at least 200 m long. Also used for funicular aerial tramways, gondolas chair lift, drag lift or zipline.

Object type	Object type number	Definition	Description	Comment
Reindeer fence	1980	fence intended to lead reindeer between different pastures and to collection points		Presented completely apart from capture fences shorter than 200 metres at <i>reindeer enclosures</i> .

Table 30. Set of attributes for Building facility line.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of building facility line.	Range of values for valid values.

### 5.3.3 BUILDING FACILITY POINT

Table 31. Contents in Building facility point (Layer name: byggnadsanlaggningspunkt)

Object type	Object type number	Definition	Description	Comment
Mast	2019	tall and vertical construction erected on a small area, often anchored with cables	Not intended to contain or hold a notable space (in comparison to a tower).	Mapped for tele, radio and TV masts that are at least 25 metres high. Where multiple masts are closely situated, a selection is presented.
Chimney	2022	vertical pipe-shaped construction to divert smoke		Free standing or as a part of a building. All prominent chimneys in the



Object type	Object type number	Definition	Description	Comment
				landscape that are at least approximately 25 meters tall are to be mapped.

Table 32. Set of attributes for Building facility point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of building facility point	Range of values for valid values.
hojd	Integer	3	height above ground	
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

### 5.3.4 BUILDING POINT

Table 33. Contents in Building point (Layer name: byggnadspunkt)

Object type	Object type number	Definition	Description	Comment
Building, size class 1	2045	building or small group of buildings where the largest building	Residential, industrial, public function, commercial, agricultural, complementary building, or other building	Normally consists of 1-3 buildings. The largest building has an area of 50-400 square

Object type	Object type number	Definition	Description	Comment
		corresponds to a certain size	that lack the characteristics that distinguish the other types of building points.	<p>meters. Some isolated or significant buildings can have a smaller area (20-50 square meters). All type of shape can occur, except for circular ones. Not included inside built-up areas.</p> <p>Buildings that are clearly elongated and are 200-600 square meters are instead presented as Building, size class 2 or Building, size class 3.</p> <p>Example: Residential building, cabin, military facility, office, shopping, public building, industry.</p>
Building, size class 2	2046	building or small group of buildings where the largest building corresponds to a certain size and shape and is larger than size class 1	Residential, industrial, public function, commercial, agricultural, complementary building, or other buildings that lack the characteristics that distinguish the other types of building points, shopping, public buildings, industries.	<p>The largest building has an area of 270-650 square meters. Elongated houses where none of the sides exceed 55 m. Not included inside built-up areas.</p> <p>Examples: Residential building, military facility, office, shopping, public building, industry.</p>
Building, size class 3	2047	building or small group of buildings	Residential, industrial, public function, commercial, agricultural,	The largest building has an area of 280–1250 square

Object type	Object type number	Definition	Description	Comment
		where the largest building corresponds to a certain size and shape and is larger than size class 2	complementary building or other buildings that lack the characteristics that distinguish the other types of building points.	meters. Elongated houses where the longest side is 50–70 m. For angled houses, the longest side is measured. Not included inside built-up areas. Example: Residential buildings, military facility, office, shopping, industry, and agricultural building.
Solitary cabin in the mountains	2032	remotely located cabin, within the coverage area for Lantmäteriet's mountain range information., which is usually locked and not intended for tourists		Examples: surveillance cabins, staff cabins, hunting and fishing cabins, reindeer herder cabins
Mountain lodge	2033	tourist facility with buildings for services, activities, and accommodation	Outside of the tourist season, access to an open emergency shelter is available.	STF-owned mountain lodge are included as well as Låktatjåkko mountain lodge.
Research station	2048	building where research is conducted		
Lighthouse	1051	device for sea traffic that, through light or other signals, provides positional		Historical lighthouses and coastal lighthouses are mapped.

Object type	Object type number	Definition	Description	Comment
		controls or warnings		
Local heritage farmstead	2049	older farm or collection of buildings preserved to highlight and support the local cultural heritage	In most cases, it has been taken over by the local heritage association and is managed by the same.	
Manor	2034	larger farm property with elegant buildings	<ul style="list-style-type: none"> <li>Residential building for an estate where the building's design and location are prominent.</li> <li>Residential building whose function was the main building for a manor or estate but now serves a different purpose.</li> <li>Larger residential building that has been built as a private residence for the owner and that together with surrounding property have a manor-like style</li> </ul>	
Bell tower	2016	tower-like, free standing construction built for church bells often adjacent to a church		Presented if there is space.
Church	1042	building permanently used for religious worship within	A building in the landscape with a distinct character of a church, whether ancient or contemporary.	Chapels may be included if there is no reported church nearby. Processed material with support

Object type	Object type number	Definition	Description	Comment
		the Church of Sweden		from information provided by the Church of Sweden and the Swedish National Heritage Board.
Nuclear power plant	2035	facility that generates electricity from nuclear power	Also includes decommissioned nuclear power plants.	Completely included. Example: Forsmark
Sami cot	1044	basic conical or dome shaped building in mountain regions intended for stays		Updated only within the coverage area for Lantmäteriet's mountain range information. Cartographic selection may occur.
Naturum	2050	Information centre where visitors receive information about the local area's geology, flora, fauna, and cultural history	Naturum serves as a gateway to nature. The building often harmonizes with the surrounding environment, and the activities provide everyone with an opportunity to gain experience more about nature and the environment. The Swedish Environmental Protection Agency owns the right to the name Naturum. They are operated by county administrative boards, municipalities, or foundation.	
Rest cabin	1050	cabin that can be used for protection or for rest and is always unlocked	Rest cabin according to the government's trail network, often have emergency phones.	Information is obtained from county administration boards, municipalities, STF (Swedish Tourist Association), the tourism industry, designated contact

Object type	Object type number	Definition	Description	Comment
				persons or through field controls and by image interpretation.
Religious building	2037	A building permanently used for religious worship outside the Church of Sweden.	A distinctive building in the landscape with a pronounced religious character.	Processed material with support from information found on Google.  Examples: Mosque, synagogue, temple, free church.
Blast shelter	1052	space underground for protection during rocket launches or other types of shooting		Presented within Esrange space centre. Cartographic selection may occur.
Castle	2038	monumental historical building that is or has been owned by a royal or noble person		
Tower	1045	tall and vertical structure built on a relatively small area or on another building	intended to contain or hold a notable space (in comparison to a mast)	All towers that are prominent in the landscape are included. Examples: Mining tower, fire tower, view tower, water tower and bird tower.
Tourist cabin/overnight cabin	2041	cabin located in connection to the state mountain trail system and intended for overnight stays	An open emergency shelter is always available here. Many tourist cabins along the state mountain trail system have emergency telephones.	Mapped within the coverage area for Lantmäteriet's mountain range information.

Object type	Object type number	Definition	Description	Comment
Wind turbine	2025	tower or mast with a device that converts wind energy to electricity		Mapped for all wind turbines that are at least 25 metres high, including the maximum heights of the rotor blades above the ground. Cartographic selection may occur.
Lean-to	1046	basic building for outdoor activities with the purpose to provide hikers protection from wind and rain	The building has three walls and a roof.	Mapped along hiking trails. Within the coverage area of Lantmäteriet's mountain range information. Lean-tos are also mapped even if they are not located near a trail. Cartographic selection may occur.  Example: Wind shield, lean-to.
Windmill	1047	building erected to mill grains using wind power		Mapped for all windmills with a characteristic building form. Sails may be missing. Cartographic selection may occur.

Table 34. Set of attributes for Building point

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	

Attribute	Type	Length	Definition	Description
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	states type of building point	The value range describes valid values.
hojd	Integer	3	height above ground	
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

## 5.4 Hydrography

Table 35. Layers included in the Hydrography theme.

Hydrography	Layer name
Hydro facility line	hydroanlaggningslinje
Hydro facility point	hydroanlaggningspunkt
Hydrographically interesting place (line)	hydrografiskt_intressant_plats
Hydro line	hydrolinje
Hydro point	hydropunkt



#### 5.4.1 HYDRO FACILITY LINE

Table 36. Contents in hydro facility line (Layer name: hydroanlaggningslinje)

Object type	Object type number	Definition	Description	Comment
Dam construction	1903	permanent barrier over a water course that dams or controls its flow		Construction for creation of mirror ponds is not included. The minimum length for reporting is 40 meters. Dam constructions shorter than 40 metres are presented as <i>Dam construction, point</i> .
Jetty	1902	construction that extends into the water, intended for mooring of smaller ships	The jetty can also be used for swimming etc.	Jetties are mapped according to the following criteria: <ul style="list-style-type: none"> <li>• Those that are at least 18 meters long and connect different land areas.</li> <li>• Those that connect land with a mapped pier.</li> <li>• Those that lead to a mapped building in water (manually cartographically selected for presentation at a scale of 1:50,000).</li> </ul>
Pier	1907	long, anchored structure used to protect harbours and anchorages from waves	Often extends from the shore into the water but can also be surrounded by water and without connection to the shoreline.	Pier 100 m and longer is mapped.

Object type	Object type number	Definition	Description	Comment
Flume line	1910	construction for transporting water or timber using gravity		Mapped for all flume lines longer than about 200 metres and which are a part of or connected to mapped water courses.  Example: Water pipe, water gutter and log flumes.
Aqueduct	1911	structure for transporting water courses over an obstacle	The obstacle can be a valley, road, railway, or another water course.	The aqueducts in Håverud, Kungs Norrby and Ljungsbo are mapped.

Table 37. Attribute set for Hydro facility line.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	specifies the type of hydro facility line	Range of values for valid values.

#### 5.4.2 HYDRO FACILITY POINT

Table 38. Contents in hydro facility point (Layer name: hydroanlaggningspunkt)

Object type	Object type number	Definition	Description	Comment
Lock gate	1922	construction for raising and lowering the water level in a waterway to	A lock always consists of at least two lock gates.	Presented completely.

Object type	Object type number	Definition	Description	Comment
		enable boat traffic		
Dam construction, point	1923	permanent barrier over a water course that dams or controls flow		Construction for creation of mirror ponds is not included. Dam constructions shorter than 40 metres are mapped. Longer dam constructions are presented as <i>Dam construction (line)</i> .

Table 39. Set of attributes for hydro facility point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	specifies the type of hydro facility line	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

### 5.4.3 HYDROGRAPHICALLY INTERESTING PLACE (LINE)

Table 40. Contents in Hydrographically interesting place (Layer name: hydrografiskt\_intresant\_plats)

Object type	Object type number	Definition	Description	Comment
Rapids	1583	fast flowing watercourse or series of smaller waterfalls in several steps	Part of a watercourse where the water is turbulent, due to speed, slope, and bottom conditions.	Presented in watercourses that are 6 metres or wider to show the character and navigability of the watercourse. The minimum length for presentation is approximately 50 meters.
Waterfall	1584	part of a watercourse where the water falls from a higher level to a lower level, more or less vertically		Fully presented in watercourses that are at least approximately 20 metres wide.  In narrow watercourses down to approximately 6 meters, only significant waterfalls are presented.

Table 41. Attribute set Hydrographically interesting place.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates type of hydrographically interesting place	Range of values for valid values.

#### 5.4.4 HYDRO LINE

Table 42. Contents in Hydro line (Layer name: hydrolinje)

Object type	Object type number	Definition	Description	Comment
Watercourse	1581	natural or man-made flowing water that is part of a drainage system		Watercourse part of flowing networks and is 100 m or longer is included. Watercourse not part of flowing networks and is 200 m or longer is included. Watercourse smaller than 6 m wide is presented as size class 1. Watercourse that is 6-17 m wide is presented as size class 2.

Table 43. Attribute set for Hydro line.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	specifies the type of hydro line	Range of values for valid values.
vattendrag-sid	Text	36	common identity for all included parts of water courses from source to mouth	Watercourse ID can be found on all line-represented water-courses.
storleksklass	Text	255	specifies the water courses size	In this product, all watercourses are class 1 or 2.

Attribute	Type	Length	Definition	Description
kanal	Text	255	man-made water course for ships	Value range: Ja, Nej, Ingen information (Yes, No, No information).

#### 5.4.5 HYDRO POINT

Table 44. Contents in Hydro point (Layer name: hydropunkt)

Object type	Object type number	Definition	Description	Comment
Current direction arrow, small	1596	symbol for flow direction on narrower watercourses		Used for watercourses narrower than 6 metres and is placed on the watercourse line.
Current direction arrow, large	1597	symbol for flow direction in watercourses or along narrower watercourses.		Used for watercourses that are 6 metres or wider.

Table 45. Attribute set for Hydro point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of hydrographic facility point	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in

Attribute	Type	Length	Definition	Description
				degrees (360 degrees in a circle).

## 5.5 Height

Table 46. Included layers in the theme Height.

Height	Layer name
Contour line	hojmlinje
Elevation point	hojdpunkt
Contour line text	hojdkurvstext

### 5.5.1 CONTOUR LINE

Table 47. Contents in Contour line (Layer name: hojmlinje)

Object type	Object type number	Definition	Description	Comment
Contour line 5	2401	contour line for height that represents the equidistance 5 m	Adjacent contour lines together illustrate differences in elevation in the terrain.	The equidistance is 5 m. Used outside the coverage area for Lantmäteriet's mountain range information in products in 1:50,000.
Contour line 10	2404	contour line for height that represents the equidistance 10 m	Adjacent contour lines together illustrate differences in elevation in the terrain.	The equidistance is 10 m. Used inside the coverage area for Lantmäteriet's mountain range information in products in 1:50,000.
Depression contour 5	2402	contour line for a depression that represents the equidistance 5 m	Depression contours together show height differences in the terrain.	The equidistance is 5 m. Is used nationwide for products in 1:10,000. Used outside the coverage area for Lantmäteriet's

Object type	Object type number	Definition	Description	Comment
				mountain range information in products in 1:50,000.
Depression contour 10	2405	contour line for a depression that represents the equidistance 10 m	Depression contours together show height differences in the terrain.	The equidistance is 10 m. Used inside the coverage area for Lantmäteriet's mountain range information in products in 1:50,000.

Table 48. Attribute set for Contour line.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of contour line	Range of values for valid values.
hojdvarde	Text	4	height above the sea in metres	
stodkurva	Text	255	contour lines that represent a certain elevation in the terrain	Every fifth elevation contour line is presented more prominently. Value range: Ja/Nej (Yes/No)
i_glaciar	Text	255	indicates if the contour line is on a glacier	Value range: Ja/Nej (Yes/No)

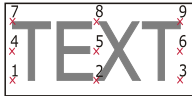


### 5.5.2 CONTOUR LINE VALUE

Table 49. Contents in Contour line value (Layer name: *hojdkurvstext*)

Object type	Object type number	Definition	Description	Comment
Contour line value	2403	elevation value for a contour line		

Table 50. Attribute set for Contour line value.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for exchange objects	
skapad	DateTime	23	time when the object was created	
textkategori	Text	255	grouping is used to control the printing of text	The text category is used to control font style (normal/italic/bold/light) and colour (black/blue/green/...). Text type can also be used to control style.
textstorleksklass	Text	255	specifies which font size to use depending on the scale	In combination with text category, scale, and possibly text type, the printing of text is controlled.
textlage	Integer	3	insertion point for text	Text position is 5. <i>Figure 2. Image showing the text's insertion point.</i> 
texttyp	Text	255	indicates type of text	Contour values are always of type U (information text) Text type can be used to control style

Attribute	Type	Length	Definition	Description
karttext	Text	4	cartographic text	The map text can be hyphenated or abbreviated.
textriktning	Floating point	6.2	rotation for text	Text rotation is specified in degrees (0.00 – 360.00, increasing anti-clockwise). 0.00=Unoriented text.

### 5.5.3 ELEVATION POINT

Table 51. Contents in Elevation point (Layer name: *hojdpunkt*)

Object type	Object type number	Definition	Description	Comment
Triangulation station	2412	geodetic elevation point that is part of the national triangulation network	Elevation point that is geodetically accurately positioned in plan that is part of the national triangulation network. Presented in whole metres.	Primary points (class 1 and 2) from the third nation triangulation are presented according to a certain selection.
Height fixed point	2413	geodetic elevation point that is part of the national height network	Levelled point included in the national levelling project or precision levelling project. Presented in whole metres.	The selection is done so that the distance between the points is 1 to 2 kilometres.
Spot elevation	2411	unmarked elevation point	Elevation point that does not need to be marked, ex. at a junction, on a summit or similar. Presented in whole metres.	Some older ground heights in southern mountain regions have lower quality because they are measured with barometers.

Table 52. Attribute set for Elevation point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for exchange objects	

Attribute	Type	Length	Definition	Description
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of elevation point	Range of values for valid values.
hojdvarde	Integer	4	height above the sea in metres	
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

## 5.6 Communication

Table 53. Included layers in the theme Communication

Communication	Layer name
Road line	vaglinje
Road point	vagpunkt
Ferry route (line)	farjeled
Other road (line)	ovrig_vag
Mountain transport route (line)	transportled_fjall
Mountain point of interest	ledintressepunkt_fjall
Rail traffic (line)	ralstrafik
Rail traffic station (point)	ralstrafikstation

### 5.6.1 ROAD LINE

Table 54. Contents in Road line (Layer name: vaglinje)

Object type	Object type number	Definition	Description	Comment
Motorway	1801	road that corresponds to traffic regulations for motorways		The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 meters are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Two-lane expressway	1802	road that corresponds to the regulations for a two-lane expressway		The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable. Roundabouts are

Object type	Object type number	Definition	Description	Comment
				presented if they have a diameter exceeding 30 m.
Divided road	1803	road where oncoming traffic is separated by a median barrier	Motorways and two-lane expressways are not included. However, other four lane roads and regular roads where traffic directions are separated by a median barrier is included.	The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Country road	1804	main road with one lane in each direction separated by a centre line		The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable.

Object type	Object type number	Definition	Description	Comment
				Roundabouts are presented if they have a diameter exceeding 30 m.
Country road, small	1805	state road with road number >499		The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Small road	1806	private road, suitable for cars	Included here are state-funded private roads that are allowed to be trafficked as well as private roads outside of built-up areas that the municipality has classed as a good car road and in some cases receive municipal contributions.  The road often has a basic standard and can normally be trafficked by car.	The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically

Object type	Object type number	Definition	Description	Comment
				suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Small road, basic standard	1807	private road, less suitable for cars	<p>A private road, with a basic standard, often without winter maintenance. Forest roads are included.</p> <p>Generally motor vehicle traffic is not allowed without permission. Roads with a road barrier are often of this type.</p>	<p>The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable.</p> <p>Roundabouts are presented if they have a diameter exceeding 30 m.</p>
Arterial road	1808	road that is a part in the main network for car traffic	Examples include routes, throughfares, ring roads and entrances to towns and built-up areas.	<p>The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is</p>

Object type	Object type number	Definition	Description	Comment
				cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Main street	1809	road within a built-up area that is part of the main network for car traffic.	Main street in a built-up area. Often maintained by municipality.	The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50, 000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Local street, large	1810	road that is part of the local car traffic network	Designed for mixed traffic with unprotected road users. Collecting local roads are usually included.	The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two



Object type	Object type number	Definition	Description	Comment
				where it is cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Local street, small	1811	smaller road that is part of the local car traffic network	Pedestrian streets are included. Also includes streets within pedestrian zones, which are regulated for vehicles to travel at walking speed.	The road lines from the Swedish Transport Administration's product Road type have been generalized and cartographically adjusted for presentation in scale 1:50,000. Roads shorter than 100 m are generally not presented. Parallel lanes are presented with a single line instead of two where it is cartographically suitable. Roundabouts are presented if they have a diameter exceeding 30 m.
Unclassified	1816	road that has not been classified	May be a provisional road that has not yet been classified. The roads are downloaded from the Swedish Traffic Administration.	

Table 55. Attribute set for Road line.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	

Attribute	Type	Length	Definition	Description
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of road line	Range of values for valid values.
avfarts-vag_pafarts-vag	Text	255	indicates if the road section is included in a slip road	Collected from the Swedish Transport Administration's product Road type.  Value range: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> ).
cirkulations-plats	Text	255	indicates if the road section has a traffic regulation for a roundabout	Collected from the Swedish Transport Administration's product Road type.  Value range: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> ).
bro_och_tunnel	Text	255	indicates if the road section includes any form of bridge or tunnel	Refer to value range Level.
gagata	Text	255	indicates if the road section has a traffic regulation for a pedestrian road	Collected from the Swedish Transport Administration's product Road type.  Value range: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> ).

Attribute	Type	Length	Definition	Description
bussgata	Text	255	road section with traffic regulations stating that the lane is reserved for vehicles in public transport	Collected from the Swedish Transport Administration's product Road type.  Value range: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> ).
industrivag	Text	255	road section serving as an industrial road	Collected from the Swedish Transport Administration's product Road type.  Value range: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> ).
gatunamn	Text	255	name of street	Collected from the Swedish Transport Administration's product Road type.
vardvagnummer	Text	255	complete road number for the main road	Combination of main number, sub-number, and European road. Used for printing in map products.  The information is based on data from the Swedish Transport Administration's product <i>Road type</i> .  Examples: E4, E20.8, 859, 891.1
gastvagnnummer	Text	255	complete road number for guest road 1	Combination of main number, sub-number, and

Attribute	Type	Length	Definition	Description
				European road. Used for printing in map products.  The information is based on data from the Swedish Transport Administration's product <i>Road type</i> .
gast-vag2nummer	Text	255	complete road number for guest road 2	Combination of main number, sub-number, and European road. Used for printing in map products.  The information is based on data from the Swedish Transport Administration's product <i>Road type</i>
alternativt_manér	Text	255	States that organization objects should be managed separately during cartographic presentation.	Example: Two lanes are kept. Used to solve some problems, e.g., at tunnels and slip roads.  Value range: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> ).

Table 56. Value range Level.

Value	Definition
överfart ( <i>overpass</i> )	road or rail traffic that passes over another object
underfart ( <i>underpass</i> )	road or rail traffic that passing under another object
tunnel ( <i>tunnel</i> )	underground road or rail traffic

Value	Definition
överfart och underfart ( <i>overpass and underpass</i> )	road or rail traffic that passes over or under another object
Ingen information	

### 5.6.2 ROAD POINT

Table 57. Contents in Road point (Layer name: *vagpunkt*)

Object type	Object type number	Definition	Description	Comment
Locked gate or boom gate	2203	permanent physical obstacle in the form of a locked gate or barrier with the purpose of prevent unauthorised traffic		Presented fully for <i>Small road</i> and <i>Small road, simple standard</i> . Exception for road shorter than 250 m and roads inside built-up areas.
Turnaround	2205	road area at the end or along a road that is designed to provide longer vehicles the opportunity to turn around	Only turnarounds are presented.	Presented fully for <i>Small road</i> and <i>Small road, simple standard</i> . Exception for road shorter than 500 m and roads inside built-up areas.
Rest area	2207	facility alongside a road for travellers need to rest, use toilets, recreate or similar		Selection according to the Swedish Transport Administration's product <i>Service area</i> .
Interchange	2209	plane separated junction where entrance and exit can be accessed	Centre point for interchanges is mapped.	Based on the Swedish Transport Administration's product <i>Junction</i> .

Table 58. Attribute set for Road point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objektypnr	Integer	4	a unique integer for the object type	
objektyp	Text	255	indicates the type of road point	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).
trafikplatsnummer	Integer	4	The Swedish Transport Administration's number for interchanges	Examples: 174, 110b

### 5.6.3 FERRY ROUTE

Table 59. Contents in Ferry route (Layer name: farjeled)

Object type	Object type number	Definition	Description	Comment
Ferry route	1891	route for ferry traffic	Ferry route with car ferries in regular traffic.	<p>Within the country the following is mapped:</p> <ul style="list-style-type: none"> <li>- Ferry routes operated by the Swedish Transport Administration's ferry company.</li> <li>- Other ferry routes that connect the</li> </ul>

Object type	Object type number	Definition	Description	Comment
				<p>state road network.</p> <ul style="list-style-type: none"> <li>- Other ferry routes with year-round traffic and a fixed timetable.</li> </ul> <p>International ferry routes are also included.</p>

Table 60. Attribute set for *Ferry route*.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of <i>Ferry route</i> .	The object type is always <i>Ferry route</i> for this object.
destination	Text	50	destination for the <i>Ferry route</i>	Examples: Nynäshamn-Visby, Kvarsebo-Skenäs, International examples: Riga (LV), Turku (FI).
vagnummer_nationell	Text	20	road number for domestic ferry routes	

#### 5.6.4 OTHER ROAD

Table 61. Contents in Other road (Layer name: ovrig\_vag)

Object type	Object type number	Definition	Description	Comment
Park road	1842	pedestrian road within a landscaped park		A shared pedestrian and cycle paths within landscaped parks are mapped as <i>Cycle path</i> .
Bicycle path	1623	road where only bicycles and class II mopeds are allowed		Completely mapped if it connects different built-up areas or leads to specific locations. Not included if it is part of another road.
Footpath	1624	well-trodden path		<p>Mapped when:</p> <ul style="list-style-type: none"> <li>-Leads to built-up areas (minimum length 100 metres).</li> <li>-Leads to a specific destination (minimum length 250 metres). For example: Lakes, viewpoints, wetlands, or sites of cultural heritage.</li> <li>-Connects roads.</li> <li>-Runs along a beach.</li> </ul> <p>Within trail-dense areas, some editing may be required to present the areas characteristics.</p> <p>Within the coverage area for Lantmäteriet's mountain range information clear roads created by quadbikes are</p>



Object type	Object type number	Definition	Description	Comment
				also mapped as <i>Footpath</i> .
Illuminated exercise track	1625	illuminated tracks with prepared and maintained trail or track		Mapped completely.
Tractor path	1628	road that normally lacks a road body but has a prepared roadway of a permanent nature intended for tractors	The road is in generally accessible for farming tractors with trailers and off-road vehicles (vehicles with high ground clearance, larger wheels, and four-wheel drive).	<p>Mapped when:</p> <ul style="list-style-type: none"> <li>-Has a length exceeding 500 meters</li> <li>- Leads to built-up areas (minimum length 100 metres).</li> <li>-Leading to other specific destination (minimum length 250 metres).</li> <li>-Connects roads.</li> <li>-Follows a beach.</li> <li>- Is constructed as a trotting training track.</li> </ul> <p>Not included:</p> <ul style="list-style-type: none"> <li>-Timber-hauling Road (temporary road used to transport timber)</li> <li>- Winter road (old road that crosses wetland areas).</li> </ul>
Hiking trail	1846	marked trail along a path or road intended for hiking	Example of trails are <i>Sörmlandsleden</i> , <i>Kungsleden</i> and various Pilgrim trails.	Mapped if it is at least 10 kilometres long, except within the coverage area of Lantmäteriet's mountain range information, where it is mapped regardless of length.

Object type	Object type number	Definition	Description	Comment
				Additionally, it should be named and clearly marked, normally with painted orange rings on trees or poles. On alpine tundra painted cairns or low poles are used.
Hiking and winter trail	1847	marked trail along a path or road intended for hiking, skiing, or snowmobiles.	Marked with red crosses on poles. Restrictions for snowmobiles may apply.	Well-marked and maintained trails are included. Mapped within the coverage area for Lantmäteriet's mountain range information.
Winter trail	1848	marked trail intended for skiing or snowmobiles	Marked with red crosses on poles. Restrictions for snowmobiles may exist.	Well-marked and maintained trails are included. Mapped within the coverage area for Lantmäteriet's mountain range information.

Table 62. Attribute set for *Other roads*.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	specifies the type of <i>Other road</i>	Range of values for valid values.

Attribute	Type	Length	Definition	Description
vagutforande	Text	255	specifies the road's relationship to other roads or terrain	Summer bridge is only valid for the detail type <i>Hiking trail</i> . See value range <i>Road construction</i> .
skoterkning_tillaten	Text	255	specifies if snowmobiles are allowed	Obligatory for the object <i>Hiking and winter trail</i> . See value range <i>Snowmobiles</i> .
ruskmarkering	Text	255	specifies if the trail has a landmark of stone or not	Obligatory for the object <i>Winter trail</i> . Value quantity: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> )
alternativt_manér	Text	255	states that the organization object should be separately treated during cartographic presentation	Makes the presentation of hiking trails by the side of a road possible. Value quantity: Ja, Nej, Ingen information ( <i>Yes, No, No information</i> )

Table 63. Value range Road construction.

Value	Definition	Comment
Bro ( <i>Bridge</i> )	construction meant to carry traffic over an obstacle	
Normal ( <i>Normal</i> )	road on the ground	
Sommarbro ( <i>Summer bridge</i> )	bridge that is removed during the winter season to avoid damage	Only valid for the object type <i>Hiking trail</i> .

Value	Definition	Comment
	caused by snow melt	
Tunnel ( <i>Tunnel</i> )	underground road	
Underfart ( <i>Underpass</i> )	road or trail that goes underneath another object	
Ingen information ( <i>No information</i> )		

Table 64. Value range Snowmobile driving

Value	Definition
Ja ( <i>Yes</i> )	snowmobiles are allowed on the trail
Nej ( <i>No</i> )	snowmobiles are not allowed on the trail
Påbjuden ( <i>Mandatory</i> )	snowmobiles are mandatory on the trail within a restricted area
Ingen information ( <i>No information</i> )	.

### 5.6.5 TRANSPORT TRAIL MOUNTAIN

Table 65. Contents in Mountain Transport Trail (Layer name: *transportled\_fjall*)

Object type	Object type number	Definition	Description	Comment
Suitable travel route	1822	recommended route that is not marked in the terrain		Only included in high mountain areas.
Reindeer herding trail	1823	trail for the reindeer husbandry	Used for <i>reindeer moving trail</i> and <i>reindeer husbandry trail</i> .	

Object type	Object type number	Definition	Description	Comment
Capture line across trail	1824	marking across a trail's direction of travel to facilitate orientation in harsh weather		Mapped within the coverage area for Lantmäteriet's mountain range information.
Rowing trail	1825	trail with accessible boats	Used to enable crossings of larger water courses or lakes during hiking.	Included along the <i>Kungsleden</i> trail in Norrbotten county.
Trail, poorly marked	1826	indistinct walking trail		Included when it leads to settlements or other destinations on the map, connects roads or goes along shores. Destinations include for example a lake, viewpoint on a mountain, wetland, ancient remains or field.  Presented within the coverage area for Lantmäteriet's mountain range information.
Ski trail	1821	Marked trail in terrain, along a road or path intended for skiing	The trails are of permanent nature, prepared on the ground, well-trodden and marked in the terrain.	Presented within the coverage area for Lantmäteriet's mountain range information. Longer ski trails are presented with a line, while other ski trails are presented only with symbols. Skiing trails that follow other linear objects, e.g., winter train is presented only with a symbol.

Object type	Object type number	Definition	Description	Comment
Boat portage	1827	permanent facility to move boats between lakes	Minimum length ca 200 m.	Example: Boat portage at Hävlingen.
Trafficated boat route	1828	route for boat traffic that connects trails		Mapped completely within the coverage area for Lantmäteriet's mountain range information.

Table 66. Attribute set for Transport trail mountain.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of transport trail in the mountains	Range of values for valid values.
rennaringsledstyp	Text	255	indicates the type of reindeer husbandry route	Value is only specified for the object type <i>Reindeer husbandry route</i> and is mandatory.  See value range <i>Type of reindeer husbandry route</i> .

Table 67. Value range Type of reindeer husbandry trail

Value	Definition
Renflyttningsled ( <i>Reindeer moving trail</i> )	trail used for moving reindeer herds between different grazing lands

Value	Definition
Renskötärlad ( <i>Reindeer husbandry trail</i> )	trails used by reindeer herders

### 5.6.6 MOUNTAIN POINT OF INTEREST

Table 68. Contents in Mountain point of interest (Layer name: ledintressepunkt\_fjall)

Object type	Object type number	Definition	Description	Comment
Ford	1832	suitable crossing for hikers over larger water courses lacking bridges	Fords are mapped along the most frequently used trails in the mountains. Some fords outside the trails are also mapped, but these are well-known and have been used by the Sami people and hikers for a long time.	Which fords that are mapped are always decided in collaboration with nature conversationalists, tour guides and Sami people. Mapped fords do not mean that crossing the water courses is always possible. Water levels can change very quickly in high mountain areas during heavy rainfall. Large variations in snow melt can also occur within a day.  Mapped within the coverage area for Lantmäteriet's mountain range information.
Ski trail symbol	1831	symbol for ski trail	Ski trail symbol is presented along ski trails to ease map reading.	
Emergency phone	1833	landline telephone available for emergency calls and short messages, which is always accessible	The emergency phone cannot be used for private calls because it is directly connected to the police's/mountain rescue's emergency centre.	Mapped completely within the coverage area for Lantmäteriet's mountain range information.

Object type	Object type number	Definition	Description	Comment
Parking	1834	artificial area in mountain regions intended for car parking	The parking is a suitable starting point for continue foot/skis/snowmobile on a trail or in some cases by boat. Often there is information boards with tourist information.	Larger maintained car parks are mapped.
Mandatory route for snowmobiling	1836	symbol indicating where snowmobile driving is allowed within prohibited areas		Presented for <i>Winter trail</i> or <i>Hiking and winter trail</i> , which permit snowmobile traffic within the area <i>Prohibited area for terrain vehicles</i> .
Storm bell	1835	device that, with a bell, facilitates navigation to the location	The bell rings when the wind blows hard enough and helps the hikers finding the shelter in poor visibility.	The storm bell at Endalen's shelter is the only one in Sweden. It was erected in 1930 by a group of Norwegians as a thank you for being rescued in the easter snowstorm of 1927.
Pedestrian bridge, point	1838	Building structure designed to facilitate hikers over an obstacle		Presented within the coverage area for Lantmäteriet's mountain range information.  Example: Suspension bridge, duckboard
Flashing beacon	1837	Device that, facilitates navigation to the location with regularly occurring flashing signals	The flashing beacon at Blåhammaren's mountain station is the only land lighthouse in Sweden.	



Table 69. Attribute set for Trail point of interest mountain.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of trail point of interest in the mountains	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).
vagutforande	Text	255	specifies the road's relationship to other roads or terrain	See value range Road type.

Table 70. Value range Road type

Value	Definition
Bro ( <i>Bridge</i> )	construction meant to carry traffic over an obstacle
Sommarbro ( <i>Summer bridge</i> )	bridge that is removed during the winter season to avoid damage caused by snow melt

### 5.6.7 RAIL TRAFFIC

Table 71. Contents in Rail traffic (Layer name: ralstrafik)

Object type	Object type number	Definition	Description	Comment
Railway	1861	rail traffic that is part of the		Presented according to a

Object type	Object type number	Definition	Description	Comment
		national railway network as well as industrial tracks		cartographic selection. Parallel railway tracks are presented with a single line instead of two where it is cartographically appropriate. Significant generalization on marshalling yards and station areas.
Heritage railway	1862	rail traffic with museum activities	A heritage railway can either be built for this purpose have been used in regular train traffic before being shut down and converted to a heritage railway.	

Table 72. Attribute set for Rail traffic.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of rail traffic	Range of values for valid values.
bro_och_tunnel	Text	255	indicates the stretch through a tunnel or the level for roads or railways in relation to another road or railway	See value range <i>Level</i> .

Attribute	Type	Length	Definition	Description
under_byggnad	Text	255	indicates if the rail traffic goes under a building or not	Value range: Ja/Nej/Ingen information (Yes/No/No information)

Table 73. Value set Level.

Value	Definition
Överfart (Overpass)	road or rail traffic that passes over another object
Underfart (Underpass)	road or rail traffic that passing under another object
Tunnel (Tunnel)	underground road or rail traffic
Överfart och underfart (Overpass and underpass)	road or rail traffic that passing over or under another object
Ingen information (No information)	

### 5.6.8 RAIL TRAFFIC STATION

Table 74. Contents in Rail traffic station (Layer name: ralstrafikstation)

Object type	Object type number	Definition	Description	Comment
Railway station	1871	location along a railway line intended for trains to make a stop	Mapped for railways that dispatches passengers or freight traffic. It does not need to have an associated station building.	Only stations with passenger exchanges are presented, a certain cartographic selection occurs.

Table 75. Attribute set for Rail traffic station.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	

Attribute	Type	Length	Definition	Description
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of rail traffic station	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).
status	Text	255	status of the station	See value range <i>Rail traffic status</i> .
under_mark	Text	255	indicates if the station is located underground	Value range: Ja/Nej/Ingen information (Yes/No/No information)

Table 76. Value set Rail traffic status.

Value	Definition
Avstängd (Closed)	temporarily closed for at least a year
Ej underhållen (Not maintained)	
Nedlagd (Decommissioned)	discontinued
Planerad (Planned)	
Rivet (Torn)	

Value	Definition
Öppen (Open)	open for traffic
Ingen information (No information)	

## 5.7 Cultural-historical remains

Table 77. Included layers in the theme Cultural-historical remains

Cultural-historical remains	Layer name
Cultural-historical remains, line	kultur_lamning_linje
Cultural-historical remains, point	kultur_lamning_punkt

### 5.7.1 CULTURAL-HISTORICAL REMAINS, LINE

Table 78. Contents in Cultural-historical remains, line (Layer name: kultur\_lamning\_linje)

Object type	Object type number	Definition	Description	Comment
Ancient remains, centre line	2501	elongated ancient remains from human activity during ancient times that are no longer in use		Presented based on selection by the Swedish National Heritage Board.  Examples: Sunken lane (older travel route, bridleway) or stone line (older enclosures between field and pasture).
Ancient remains, large	2502	Larger ancient remains	Presented with a boundary line.	Presented based on selection by the Swedish National Heritage Board.
Ruin, boundary line	2503	old, historical, important building made	Presented as a boundary line.	Presented based on selection by the Swedish

Object type	Object type number	Definition	Description	Comment
		of stone or bricks		National Heritage Board.
Ruin, centre line	2504	the remains of an old, preferably historical, important elongated building of stone or bricks	Presented as centre line.	Presented based on selection by the Swedish National Heritage Board. Example: The city wall of Visby
Mine shaft, boundary line	2505	cultural-historical remains of a mine shaft or pit from discontinued mining activities		The minimum area for mine shafts is at least 500 square meters. Presented based on selection by the Swedish National Heritage Board.

Table 79. Attribute set for Cultural-historical remains, line

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	

Attribute	Type	Length	Definition	Description
objekttyp	Text	255	indicates type of line-shaped cultural-historical remains	Range of values for valid values.

### 5.7.2 CULTURAL-HISTORICAL REMAINS, POINT

Table 80. Contents in Cultural-historical remains, point (Layer name: kultur\_lamning\_punkt)

Object type	Object type number	Definition	Description	Comment
Ancient remains, large information symbol	2511	large information symbol at ancient monument	Presented with a "R"-symbol.	Included completely at presented ancient monument.
Ancient remains, smaller	2512	smaller remains from human activities during ancient times that are no longer in use	Presented together with information symbol at ancient remains, so called R-symbol.	Presented based on selection by the Swedish National Heritage Board.
Milestone	2513	ancient monument used as marking of distance along country roads	The milestones are usually decorated with a royal crown and monogram as well as the distance in Scandinavian miles (1 mile - 1/2 mile - 1/4 mile). Can be made in wood, stone, or iron.	Presented based on selection by the Swedish National Heritage Board.
Ruin	2514	remains of an old, historical, important building made of stone or bricks		Presented based on selection by the Swedish National Heritage Board.  Examples: Castle ruin, fortress, and church ruin.
Commemorative stone, large information symbol	2515	large information symbol at a commemorative stone, memorial	Presented with an "Ms"-symbol.	Presented based on selection by the Swedish National Heritage Board.

Object type	Object type number	Definition	Description	Comment
		mark, or monument		
Other cultural historical remains, smaller	2516	cultural-historical remains that is not an ancient remain, but still has antiquarian value	The most common distinction between an ancient remains and other cultural-historical remains is the age. In the Cultural Environment Act of 2014, the year 1850 is defined as a breaking point. A blast furnace from 1840 is classified as ancient monument, but if it was created in 1860 it is often seen as other cultural-historical remain.	Presented based on selection by the Swedish National Heritage Board. Examples: Memorial mark, monument.
Mining shaft	2517	remains of abandoned mine		Mining shaft smaller than 500 square meters. Presented based on selection by the Swedish National Heritage Board.
Governmental listed building	2518	Cultural-historical valuable buildings, environments and facilities that have been declared as a listed building according to regulations in the Cultural Environment Act.		Presented based on selection by the Swedish National Heritage Board. (Culturally marked building, "K"-marked) Normally not included in built-up areas.



Table 81. Attribute set for Cultural-historical remains, point

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates type of cultural-historical remains	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

## 5.8 Transmissions

Table 82. Included layers in the theme Transmissions (Ledningar)

Transmission	Layer name
Transmission line	ledningslinje
Substation area	transformatoromrade
Substation area point	transformatoromradespunkt

### 5.8.1 TRANSMISSION LINE

Table 83. Contents in Transmission line (Layer name: ledningslinje)

Object type	Object type number	Definition	Description	Comment
Electricity transmission line, national	1702	transmission line for electricity		Mapped for aerial transmission line.

Object type	Object type number	Definition	Description	Comment
		distribution, usually with a voltage higher than 200 kV		
Electricity transmission line, region	1703	transmission line for electricity distribution, usually with a voltage between 25 and 200 kV		Fully mapped for aerial transmission line. In case of parallel transmission lines closer to each other than 40 meters, only the electricity transmission lines with the highest voltage are presented.
Electricity transmission line, distribution	1704	transmission line for electricity distribution, usually with a voltage between 6 and 24 kV		Presented for air cables within the coverage area of Lantmäteriet's mountain range information. In case of parallel transmission lines closer to each other than 40 meters, only the electricity transmission lines with the highest voltage are presented.
Telephone line	1707	transmission line meant for telephone traffic		Mapped to remotely located farms and only within the coverage area for Lantmäteriet's mountain range information. Telephone lines that run along roads are not included.

Table 84. Attribute set for Transmission line.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of transmission line	Range of values for valid values.

### 5.8.2 ELECTRICAL SUBSTATION AREA

Table 85. Contents in Electrical substation area (transformatorområde)

Object type	Object type number	Definition	Description	Comment
Electrical substation area	1741	area on the ground on which facilities for switching or transforming electricity are located	The area is normally fenced in.	Minimum area that is mapped is 5000 square meters.

Table 86. Attribute set for Electrical substation area.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates that the type is electrical substation area	The object type is <i>Electrical substation area</i> .

### 5.8.3 SUBSTATION AREA POINT

Table 87. Content in Substation area point (Layer name: transformatoromradespunkt)

Object type	Object type number	Definition	Description	Comment
Substation area point	1742	area on the ground on which facilities for switching or transforming electricity are located	The area is normally fenced in.	Presented for all substation areas along electric transmission lines outside of built-up areas.

Table 88. Attribute set for Substation area point

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates that the type is electrical substation area point	The object type is <i>Substation area point</i> .
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is given in degrees (360 degrees in a circle).

## 5.9 Land cover

Table 89. Layers included in the Land cover theme.

Land cover	Layer name
Land cover	mark

Land cover	Layer name
Land cover boundary lines	markkantlinje
Wetlands	sankmark
Land accessibility	markframkomlighet

### 5.9.1 LAND COVER

Table 90. Contents in Land cover (Layer name: mark)

Object type	Object type number	Definition	Description	Comment
Closed built-up area	2636	land consisting of closed coherent neighbourhood blocks with multiple floors	<p>Closed build-up area that are usually located in the centre of urban area, where lower building may be included. The development may have occasional openings to allow for transportation to and from the inner part of the block. At least three sides of the neighbourhood block should be closed.</p> <p>All associated land such as roads, parking spaces and land with other buildings are included.</p>	Presented for one or more entire adjacent neighbourhood blocks of closed built-up area. Parts of a block may also be presented, if they are larger than approximately 10,000 square metres (1 ha).
Built-up area, high	2637	land consisting of detached buildings with apartments that have three or more floors	<p>Detached buildings with apartments that have three or more floors (approximately 9 metres to edge of roof). Individual, lower buildings may occur. All associated land such as roads, parking spaces and other buildings are included.</p>	<p>Presented for one or more whole adjacent neighbourhood blocks of tall buildings. Parts of neighbourhood blocks can be presented, if they are larger than approximately 10,000 square metres (1 ha).</p> <p>Offices and retail may be included.</p>

Object type	Object type number	Definition	Description	Comment
Built-up area, low	2638	land consisting of buildings with planned neighbourhood blocks with detached two-family houses, terraced houses, semi-detached houses, or apartment buildings with, maximum two floors	Single higher buildings may be included. All associated land such as roads, parking spaces and other buildings are included.	Presented for one or more entire adjacent neighbourhood blocks of low buildings. Parts of neighbourhood blocks can be presented, if the area are larger than approximately 10,000 square metres (1 hectare).  Offices and retail may be included.
Industrial and retail area	2639	land primarily used for industry and commercial activities	All associated land such as roads, parking spaces, stores and land with other buildings are included.	Presented for one or more entire adjacent neighbourhood blocks of industry and retail. Parts of neighbourhood blocks can be presented if they are larger than approximately 10,000 square metres (1 hectare).  Offices and retail may be included.
Arable land	2642	land that has been ploughed for cultivation of grain, forage crops, oilseeds, root vegetables and vegetables.	Arable land also includes grazing land that is occasionally ploughed and sown, as well as pasturelands that are part of the crop rotation Fallows and energy forests are presented as arable land.	Minimum area presented is 1000 square metres.
Fruit orchard	2643	land used for cultivation of fruit and berry trees		The minimum area for reporting is approximately 20,000 square

Object type	Object type number	Definition	Description	Comment
				<p>metres (2 hectares).</p> <p>Smaller areas can occur but not smaller than 1000 square metres.</p> <p>Fruit orchards covering an area between approximately 900 square metres and approximately 20,000 square metres (2 hectares) are mapped as arable land. In cases where multiple small fruit orchards are near each other, the total area of these can be added up and each individual area can be mapped as a fruit orchard even if each sub-area does not meet the minimum requirement.</p>
Open land	2640	land below the treeline, mainly including natural open land, unmanaged and extensively managed meadow	Open land where the height of vegetation is less than approximately 1,5 metres but where individual trees, bushes, and smaller groves higher than 1,5 metres may be included. Also included are former agricultural land, low production pastures, natural meadows and grasslands, plot of lands and gardens with an open character outside built-up areas, undeveloped allotment areas,	Minimum area presented is 2500 square meters. Town squares are also part of Open land.

Object type	Object type number	Definition	Description	Comment
			moorlands, sandy beaches, and shingle fields. Land leased for special activities are also included, such as ski slopes, firing ranges, gravel pits and quarries. Areas by the coast with rock outcrops are also classed as open land.	
Alpine tundra	2644	all land above the tree line, except for water surfaces and glaciers	Low trees, bushes and smaller groves may occur.	The minimum size for reporting is approximately 10,000 square meters (1 hectare).
Coniferous and mixed forest	2645	land with coniferous trees or mixed coniferous and deciduous trees, including forested park land and clear-cut areas	All types of trees and bushes may be included.	The minimum size for reporting is approximately 900 square meters.  Smaller areas may occur on islands.
Deciduous forest	2646	forested land below the upper boundary of the coniferous forest, where the canopy is mainly consisting of deciduous forest	Also includes clear-cut areas. The percentage of deciduous forest must be at least 90%.	The minimum size for reporting is approximately 80,000 square metres (8 hectares). Special, smaller areas with important deciduous trees (oak, elm, maple etc.) at least approximately 40,000 square metres (4 ha) are also included.  Smaller areas may occur on islands.



Object type	Object type number	Definition	Description	Comment
Subalpine birch forest	2647	birch forest above upper limit of the coniferous forest, which extends up to the border of the alpine tundra	Individual coniferous trees may occur.  Above the upper limit of the subalpine birch forest, clusters of individual trees may occur.	The minimum reporting size is approximately 80,000 square metres (8 hectares). Areas of approximately 80,000 square metres (8 ha) with a mix of open land and subalpine birch forest adjacent to homogeneous subalpine birch forest areas can also be included.
Sea	2631	waterbody that receives water from waterbodies located on land and that are coherent with other seas	The sea level should be mapped in the normal water level if possible. Water with sparse and/or temporary reeds should be mapped as Sea. Dense, persistent belts of reeds should be mapped as Wetland, soaked.	Sea is mapped for the index squares that include the economic zone. Islands are distinguished from the water surface if they are 250 square metres or larger.  If significant objects, e.g., buildings, are present on the island the minimum area is 80 square metres.
Lake	2632	permanent, widespread regulated or unregulated surface water body on land without significant flow velocity	Natural standing water or with limited impact by a low dam threshold. Also includes smaller surface waterbodies such as forest ponds or similar.	The minimum reporting size are areas larger than approximately 850 square metres.  Islands are distinguished from the water surface if they are larger than 250 square metres.

Object type	Object type number	Definition	Description	Comment
				If significant objects, e.g., buildings, are present on the island the minimum area is 80 square meters.
Watercourse surface	2633	Surface water-body with significant flow velocity connecting to lakes or seas.	Including both natural and artificial water bodies.	<p>The watercourse width should be at least about 17 meters wide.</p> <p>Watercourse that is at least 6-17 metres is instead presented as watercourse line, size class 2.</p> <p>Islands are distinguished from the water surface if they are 250 square metres or larger.</p> <p>If significant objects, e.g., buildings, are present on the island the minimum area is 80 square meters.</p>
Artificial water	2634	surface water-body for swimming, treatment, or storage of water without inflow or outflow	Artificial water has been created by humans. Swimming pools, treatment ponds, infiltration ponds, leachate ponds, wastewater ponds, retention basin and fire ponds are included. Regulation reservoirs are mapped as Lakes.	
Glacier	2635	permanent mass of snow and ice in high mountains that slowly slide		The minimum reporting requirement is approximately 20,000 square meters (2 hectares).

Object type	Object type number	Definition	Description	Comment
		down the mountain slope		<p>Separate parts from a larger glacier are mapped if they are larger than approximately 5000 square meters (1/2 hectare).</p> <p>Permanent protruding rock/solid land that is larger than approximately 5000 square meters (1/2 hectare) is separated from the glacier. Smaller sections of protruding rock/solid land can be included in the glacier, as well as ice filled moraines that are connected to the glacier.</p>
Unmapped area	2648	an area that has not been mapped	Includes areas outside of the national border.	

Table 91. Attribute sets, Land cover (Layer name: Mark)

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of land cover	Range of values for valid values.

Attribute	Type	Length	Definition	Description
vattenytaid	Text	36	identity to keep together all water surfaces that belong to the same object	It is only specified for the object types of <i>Sea</i> , <i>Lake</i> , <i>Water-course surface</i> , <i>Artificial water</i> , and <i>Glacier</i> .  Not a mandatory attribute.
hojd_over_havet	Text	20	indicates the water surface elevation in meters above sea level	Is only specified for the object types of <i>Lake</i> and ( <i>Water-course surface</i> ).
reglerat_vatten	Text	255	indicates whether the water level is regulated	Is only specified for the object types of <i>Lake</i> and ( <i>Water-course surface</i> ). It is a mandatory attribute.  Range of values: Ja/Nej/Ingen information (Yes/No/No information.)

### 5.9.2 LAND COVER BOUNDARY LINE

Table 92. Contents in Land cover boundary line (Layer name: markkantlinje)

Object type	Object type number	Definition	Description	Comment
Boundary line, unmapped area	2611	land cover boundary line for unmapped area	Used to delimit and close surfaces in the land cover layer that are adjacent to unmapped areas.	Is presented completely for areas that border unmapped areas.
Shoreline, sea	2612	land cover boundary line between sea and land	Boundary line between sea and built-up areas, industrial and retail area, agricultural land, open land, or forest.	Against a lake or a watercourse surfaces the land cover boundary line <i>Closure against sea</i> is used.

Object type	Object type number	Definition	Description	Comment
Shoreline, lake	2613	land cover boundary line between lake and land.	Boundary line between lake and glacier, built-up area, industrial and retail area, agricultural land, open land, or forest.	Against a watercourse surfaces, the land cover boundary line <i>Closure</i> is used. Against sea the land cover line <i>Closure against the sea</i> is used.
Shoreline, watercourse surface	2614	Land cover boundary line between water course surface and land	Boundary line between water course surface and glacier, built-up area, industrial and retail area, agricultural land, open land, or forest.	When it is against a lake, the land cover boundary line <i>Closure</i> is used. When it is against the sea the land cover boundary line <i>Closure against the sea</i> is used.
Shoreline, artificial water	2615	land cover boundary line between artificial water and land	Boundary line between artificial water and built-up area, industrial and retail area, agricultural land, open land, or forest.	
Closure against the sea	2616	land cover boundary line between sea and lake or watercourse surface	<i>Closure against the sea</i> is a constructed, usually straight line used to separate the sea from a lake or a watercourse surface.	
Closure	2617	land cover boundary line between lake or watercourse surface	<i>Closure</i> is a constructed, usually straight line used to separate lakes from watercourse surfaces. It is also used where there are two adjacent lakes or two or more main watercourse branches joining. <i>Closure</i> is also used for regulation ponds as well as the beginning and end of locks.	

Object type	Object type number	Definition	Description	Comment
Glacier boundary	2618	land cover boundary line for glacier		Presented between glaciers and alpine tundra but is replaced with <i>Shoreline, lake</i> or <i>Shoreline, watercourse surface</i> towards surfaces that are bordered by these.
Built-up area boundary	2619	land cover boundary line for grouped built-up areas		Presented for <i>Closed built-up area, Built-up area, high</i> and <i>Built-up area, low</i> , but is replaced with <i>Shoreline (sea, lake, or artificial water)</i> against surfaces bordered by these.
industry and retail area boundary	2620	land cover boundary line for industry and retail areas		Presented for industry and retail buildings but is replaced by <i>built-up area boundary</i> and <i>shoreline sea, lake or artificial water</i> towards surfaces bordered by these.
Arable land boundary	2621	land cover boundary line for arable land or orchard		Presented for arable land and orchards but is replaced by <i>industry and retail area boundary, built-up area boundary</i> , and <i>shoreline sea, lake or artificial water</i> towards surfaces that are bordered by these.

Object type	Object type number	Definition	Description	Comment
Open land boundary	2622	land cover boundary line for open land, town squares or alpine tundra.		Presented for open land, town squares or alpine tundra but is replaced by <i>agricultural land boundary, industry and retail area boundary, and shoreline sea, lake or artificial water</i> towards surfaces bordered by these.
Forest land boundary	2623	land cover boundary line that distinguishes between coniferous and mixed forest, deciduous forest, and subalpine birch forest.		Presented for coniferous and mixed forest, deciduous forest and subalpine birch forest but is replaced by <i>open land boundary, agricultural land boundary, industry and retail area boundary, and shoreline sea, lake or artificial water</i> towards surfaces bordered by these.

Table 93. Set of attributes Land cover boundary line

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	

Attribute	Type	Length	Definition	Description
objekttyp	Text	255	indicates the type of land cover boundary line	Range of values for valid values

### 5.9.3 WETLANDS

Table 94. Contents in the theme Wetlands (Layer name: sankmark)

Object type	Object type number	Definition	Description	Comment
Wetland, firm	2651	peat-forming wetlands on comparably firm peat	<p>Peat-forming wetland (bog or fen) where shrub or semi-grass vegetation binds the peat Rough or smooth surface.</p> <p>The land is normally accessible by foot.</p>	<p>The minimum reporting requirement approximately 4500 square metres If a pond or lake is present in the wetland, separated and with open deep water, it should be represented as a water surface if the area is large enough, approximately 850 square metres.</p> <p>Dried out or drained wetlands that have become productive forests, are not classified as wetland</p>
Wetland, soaked	2652	bog that is often or constantly filled with water	<p>Includes various wetlands, such as peat-forming wetlands with sparse vegetation, quagmires, calcium sediment pools, reed belts in shallow water, overgrown lakes as well as floodplains adjacent to lakes and water courses.</p> <p>The land is usually difficult to access due to the water level.</p>	<p>The minimum reporting requirement approximately 4500 square metres If a pond or lake is present in the wetland, separated and with open deep water, it should be represented as a water surface if the area is large enough, approximately</p>



Object type	Object type number	Definition	Description	Comment
				<p>850 square metres.</p> <p>A wet mire covered with shallow water delimited by strings of dense vegetation in a repetitive pattern is not mapped as lake, nor any type of water.</p> <p>Dried-out or drained mires that have become productive forests, are not classified as wetland.</p>

Table 95. Set of attributes for Wetlands

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of wetland	Range of values for valid values

#### 5.9.4 LAND ACCESSIBILITY

Table 96. Contents in theme Land accessibility (Layer name: markframkomlighet)

Object type	Object type number	Definition	Description	Comment
Exposed bedrock	1571	land where the bedrock	The surface lacks vegetation or has sparse	Minimum reporting area is

Object type	Object type number	Definition	Description	Comment
		surface lacks or only has a thin layer of soil	vegetation such as lichens, mosses, grass, or other low vegetation as well as spars (low-growing, low-productive) pine forest. Within the area there may be depressions, etc. with shrubs and swamp vegetation as well as elements of spruce and birch.	approximately 15,000 square meters (1.5 hectares). Smaller areas are mapped on small islands.
Rocky ground	1573	ground with boulders	Ground with boulders, making it hard to access for terrain vehicles.	<p>There are two types of rocky grounds:</p> <ol style="list-style-type: none"> <li>1. Open land with boulders or rocks, e.g., cobblestone field and boulder beach (where the sea at or below the highest coastline has washed away finer material), boulder depression (formed by freezing and thawing) as well as escarpments. The minimum area mapped is approximately 5000 square meters (0,5 hectares).</li> <li>2. Forest land (Coniferous and mixed forest, deciduous or</li> </ol>

Object type	Object type number	Definition	Description	Comment
				<p>subalpine birch forest) with boulders that have a diameter larger than ca 1 m and is visible on the ground surface. The number of boulders per 100 square meters should be at least about 5. The minimum mapped area is approximately 15,000 square meters (1.5 hectares).</p> <p>Rocky ground is only mapped where complete information can be provided by the Geological Survey of Sweden (SGU).</p>
Dense vegetation, hard to pass	1572	land with dense and hard to pass vegetation	The vegetation types included are willow, meadow birch forest, meadow spruce forest, wet bushy heaths and healthy bushy heaths with willow and bog elements. Some areas of sloping wetland character are also included.	Mapped in the mountain area from northern Jämtland and northwards.

Table 97. Set of attributes for Land accessibility

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objektypnr	Integer	4	a unique integer for the object type	
objektyp	Text	255	indicates the type of accessibility	Range of values for valid values

## 5.10 Military area

Table 98. Included layers in the theme Military area

Military area	Layer name
Military area	milirt_omrade

### 5.10.1 MILITARY AREA

Table 99. Contents in Military area (Layer name: milirt\_omrade)

Object type	Object type number	Definition	Description	Comment
Military training area	5501	military area primarily used for grouping, firing practice, and other types of exercises that do not involve live ammunition.	Detonation of single charges or firing at a low-risk height can be conducted, see local instructions.	Presented completely. Carefully pay attention to any current barriers. The public are prohibited from access when activities are ongoing.
Military firing range	5503	military area where dangerous activities such as firing with live ammunition and detonations are	Military firing ranges can be owned or used by the state and are available mainly for the Swedish Armed Forces Defence Materiel Administration or the National Defence	Presented completely. Carefully pay attention to topical barriers. The public are prohibited when activities are ongoing.

Object type	Object type number	Definition	Description	Comment
		regularly conducted.	Radio Establishment. An area with potential risk is cordoned off, which normally constitutes a restricted area for aviation (R-area). Firing ranges over adjacent water are not part of the firing range but are delimited in the same way as firing ranges.	
Barracks area	5504	military area, usually fenced, with barracks, chancellery, mess halls, storage facilities, etc.		

Table 100. Set of attributes for Military area

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of military area	Range of values for valid values.
mo_id	Text	6	identifier for military area	An ID for the military area that comes from the Swedish Armed Forces and is used for linking our information with theirs.  Structured in the

Attribute	Type	Length	Definition	Description
				form MOXXXX where MO is a prefix and XXXX is a serial number.
skjutfaltstyp	Text	255	type of firing range	Is mandatory for the object type <i>military firing range</i> . See value range <i>Firing range type</i> .
riskområde	Text	100	militarily monitored area where firing may occur	It is only specified for <i>Military firing range</i> and is not mandatory. Example: <i>Riskområde 4</i>

Table 101. Value set *Firing range type*.

Value	Definition
Skjutfalt ( <i>Firing range</i> )	Firing range on land.
Skjutområde ( <i>Firing area</i> )	Firing range on water.

## 5.11 Nature conservation

Table 102. Included layers in the *Nature conservation theme*.

Nature conservation	Layer name
Nature conservation point	naturvardspunkt
Nature conservation line	naturvardslinje
Restricted area	restriktionsområde
Protected nature	skyddadnatur

## 5.11.1 PROTECTED NATURE

Table 103. Contents in Protected nature (Layer name: skyddadnatur)

Object type	Object type number	Definition	Description	Comment
National Park	5603	protected nature according to <i>Miljöbalken</i> (SFS 1998:808) 7 Ch 2 § or corresponding older law		Presented completely.
Nature reserve	5604	protected nature according to <i>Miljöbalken</i> (SFS 1998:808) 7 Ch. 4-6 §§ or corresponding older law		Presented completely. Minimum area for enclaves within nature reserves is 10,000 square meters.
Nature conservation area	5608	protected nature according to the <i>nature conservation law</i>	The decision to establish nature conservation areas was made by the County Administrative Board or municipalities. The possibility to establish nature conservation areas ceased when <i>Miljöbalken</i> came into act in 1998.	No data has been collected yet.
Nature monument area	5605	protected nature according to <i>Miljöbalken</i> (SFS 1998:808) 7 Ch. 10 § or corresponding older law	Area with one or more biological and/or geological natural monuments.	Minimum area that is presented is 30 square kilometres. Smaller areas are presented as <i>Nature monument, point</i> .
Animal protection area	5606	protected nature according to <i>Miljöbalken</i> (SFS 1998:808) 7 Ch. 12 § or corresponding older law	<i>Animal protection area</i> is divided into <i>bird protection area, seal protection area</i> or <i>animal protection area</i> .	Presented completely.

Object type	Object type number	Definition	Description	Comment
Culture reserve	5607	protected nature according to <i>Miljöbalken</i> (SFS 1998:808) 7 Ch. 9 §		Presented completely.

Table 104. Attribute set for Protected nature.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of protected nature	Range of values for valid values.
djurskyddstyp	Text	255	type of animal protection area	Valid only for the object type <i>Animal protection area</i> , is mandatory. See value range <i>Animal protection type</i> .

Table 105. Value range Animal protection type.

Value	Definition
Säl- och fågelskyddsområde	animal protection area for seals and birds
Djurskyddsområde	animal protection area for animals other than seals and birds
Fågelskyddsområde	animal protection area for birds
Sälskyddsområde	animal protection area for seals



Value	Definition
Ingen information	no information

### 5.11.2 NATURE CONSERVATION POINT

Table 106. Contents in Nature conservation point (Layer name: naturvardspunkt)

Object type	Object type number	Definition	Description	Comment
Nature monument	5804	nature object protected according to <i>Miljöbalken</i> (SFS 1998:808) 7 Ch. 10 § or corresponding older law		Nature monument areas smaller than 30 square kilometers are presented. Larger areas are presented as <i>Nature monument area</i> .
Other nature object	5803	distinctive nature object, not protected by law, but of general interest.	Cave, spring, or area with standing stones are mapped.	

Table 107. Attribute set for Nature conservation point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of Nature conservation point	Range of values for valid values.
rotation	Floating point	6.2	indicates orientation for a symbol	Orientation based on horizontal position with anti-clockwise rotation. Orientation is

Attribute	Type	Length	Definition	Description
				given in degrees (360 degrees in a circle).
ovrigt_natur-objektstyp	Text	255	distinctive nature object	The value only applies for the object type <i>Other nature object</i> .  See value range <i>Type of other nature object</i> .

Table 108. Value set Type of other nature object.

Object type	Definition	Description
Grotta <i>Cave</i>	natural cavity large enough for a human to enter	Caves are usually horizontal, possibly with vertical elements. Caves in mountains are the most common.
Källa <i>Spring</i>	groundwater collection flowing out of the ground, which due to constant inflow and outflow is not stagnant	Well-known and commonly named springs are mapped.
Raukområde <i>Rauk area</i>	area with several closely spaced standing stones	
Ingen information <i>No information</i>		

### 5.11.3 NATURE CONSERVATION LINE

Table 109. Contents in Nature conservation line (Layer name: naturvardslinje)

Object type	Object type number	Definition	Description	Comment
Nature reserve, line	5641	protected nature according to <i>Miljöbalken</i> (SFS 1998:808) 7 chapter 4-6 § or corresponding older law	Line-shaped area.	Example: The Vasaloppet trail.

Table 110. Attribute set for Nature conservation line

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates type of nature conservation line	Range of values for valid values.

#### 5.11.4 RESTRICTION AREA

Table 111. Contents in Restriction area (Layer name: restriktionsområde)

Object type	Object type number	Definition	Description	Comment
Fire ban	5610	area with a ban on open fires	Information is obtained from the County Administrative Board.	Mapped within the coverage area Lantmäteriet's mountain range information.
Prohibited area for off-road vehicles	5602	area where off-road vehicles is prohibited according to the Off-road Traffic Ordinance (SFS 1978:594)	Off-road vehicle traffic is prohibited according to a decision by the County Administrative Board or municipality.	Mapped within the coverage area Lantmäteriet's mountain range information.
Prohibited area for terrain vehicles, time-limited	5611	area with a time-limited ban on off-road vehicle traffic according to the Off-road Traffic Ordinance (SFS 1978:594)	Off-road vehicle traffic is prohibited during a certain time of the year out of consideration for reindeer herding, according to a decision by the County Administrative Board or municipality.	Mapped within the coverage area Lantmäteriet's mountain range information.

Object type	Object type number	Definition	Description	Comment
Tent and fire ban	5609	area with a ban on camping and open fires	Information is obtained from the County Administrative Board.	Mapped within the coverage area Lantmäteriet's mountain range information.

Table 112. Attribute set for Restriction area.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for generalized objects	
skapad	DateTime	23	time when the object was created	
objekttypnr	Integer	4	a unique integer for the object type	
objekttyp	Text	255	indicates the type of restriction area	Range of values for valid values.
informativ_text	Text	200	description of exceptions from, or information about, restricted area	Example: Snowmobile driving on the ice of lake <i>Bredåssjön</i> is allowed.
tidsbegransning	Text	100	date when the prohibition applies	Only specified for the object type <i>Prohibited area for off-road vehicles time-limited</i> , for which it is mandatory. Example: April 20 - January 10.

## 5.12 Northern Artic Circle

Table 113. Included layers in the theme Northern Artic Circle.

Northern Artic Circle	Layer name
Northern Artic Circle	polcirkeln

### 5.12.1 NORTHERN ARTIC CIRCLE

Table 114. Contents in Northern Artic Circle (Layer name: polcirkeln)

Object type	Object type number	Definition	Description	Comment
Northern Arctic circle	1881	southern boundary north of the equator for the area where the sun, at some point, is above the horizon for more than 24 hours in a row	The Arctic Circle is presented with its mean circle for a certain year. The Arctic Circle moves by approximately 0.47" (arcseconds) per year, which represents approximately 15 metres on the ground.	Presented completely.

Table 115. Attribute set for the Northern Arctic Circle

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for exchange objects	
versiongiltigfrån	DateTime	23	indicates that a certain version becomes valid and is only used to keep track of versions (does not refer to the validity of information or decision dates)	Specified in the format: 2019-04-26T11:28:03.000
lagesosakerhetplan	Floating point	6.3	average deviation from the "true" value in plane	The value is described in the unit metre.
lagesosakerhethojd	Floating point	6.3	average deviation from the "true" value in height	The value is described in the unit metre.
ursprunglig_organisation	Text	255	indicates which process or collaboration form that is responsible for the change	Lantmäteriet
objekttypnr	Integer	4	a unique integer for the object type	

Attribute	Type	Length	Definition	Description
objekttyp	Text	255	Only indicates the object type <i>Northern Artic circle</i> .	

## 5.13 Text

Table 116. Included layers in the theme Text

Text	Layer name
Text line	textlinje
Text point	textpunkt

### 5.13.1 TEXT LINE


Table 117. Contents in Text line (Layer name: textlinje)

Text category	Definition	Description	Comment
Administrative unit	name of the division of the kingdom of Sweden into counties and municipalities		
Facility area/Building facility	name of a building facility or facility area	A facility can be a single building, a collection of buildings, or otherwise developed areas intended for production, service, or recreation.	
Settlements	name of smaller settlements or single farms		
Mountain information text	name of objects in the mountain area	Examples can be Emergency phone, Mountain lodge, etc.	
Hydrography	name of hydrographic object	Lake, watercourse, wetland, glacier.	
Cultural-historical remains	name of cultural-historical remains	Can be name of ancient remains or other cultural-historical remains.	

Text category	Definition	Description	Comment
Church	name of church		
Protected nature	name of an area with long-term legal protection	In cases where the decided name form by the Government or County Administrative Board does not correspond with the established name form by Lantmäteriet, only the information text is presented, e.g., Nature reserve	
Terrain name	name of nature and terrain objects		
Urban area	name of densely built-up area		
Informational text	name that is not a place name text	Presented according to an established list of informational texts.	

Table 118. Attribute set for for Text line

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for exchange objects	
skapad	DateTime	23	time when the object was created	
textstrang	Text	100	specifies the entire text without hyphenations	Text string corresponds to informational text or register text for decided place names.  Information texts that are hyphenated and have two map texts such as "Service" and "house" should have "Service house" written in the attribute <i>textstrang</i> . Abbreviated text

Attribute	Type	Length	Definition	Description
				should have the full text written in the attribute <i>textstrang</i> .
textkategori	Text	255	grouping is used to control the printing of text	The text category is used to control font style (normal/italic/bold/light) and colour (black/blue/green/...). Text type can also be used to control style.
textstorleksklass	Text	255	specifies which font size to use depending on the scale	In combination with text category, scale, and possibly text type, the printing of text is controlled. Value range is 1–10.
textlage	Integer	1	insertion point for text	The insertion point of the text is specified by a number between 1-9.  <i>Figure 3 Image that shows the insertion point of the text.</i> 
texttyp	Text	255	indicates type of text	Type of text according to value list. N= place name U= information text Text type can be used to control style
textsparrning	Integer	3	distance between letters	Stated in %. 100% is normal distance.
karttext	Text	100	cartographic text	The map text can be hyphenated or abbreviated. Information texts that are hyphenated and have two map texts such as “Service” and “house”



Attribute	Type	Length	Definition	Description
				should have "Service house" written in the attribute <i>textstrang</i> . Abbreviated text should have the full text written in the attribute <i>textstrang</i> .
textdelnr	Integer	1	specifies whether the text is hyphenated or not	Hyphenation part 0= not hyphenated otherwise 1–9 for each part string

### 5.13.2 TEXT POINT


Table 119. Contents in Text point (Layer name: *textpunkt*)

Text category	Definition	Description	Comment
Administrative unit	name of the division of the kingdom of Sweden into counties and municipalities		
Facility area/Building facility	name of a building facility or facility area	A facility can be a single building, a collection of buildings, or otherwise developed areas intended for production, service, or recreation.	
Settlements	name of smaller settlements or single farms		
Mountain information text	name of objects in the mountain area	Examples can be Emergency phone, Mountain lodge, etc.	
Hydrography	name of hydrographic object	Lake, watercourse, wetland, glacier.	
Cultural-historical remains	name of cultural-historical remains	Can be name of ancient remains or other cultural-historical remains.	

Text category	Definition	Description	Comment
Church	name of church		
Protected nature	name of an area with long-term legal protection	In cases where the decided name form by the Government or County Administrative Board does not correspond with the established name form by Lantmäteriet, only the information text is presented, e.g., Nature reserve	
Terrain name	name of nature and terrain objects		
Urban area	name of densely built-up area		
Informational text	Name that is not a place name text	Presented according to an established list of informational texts.	

Table 120. Attribute set for Text point.

Attribute	Type	Length	Definition	Description
objektidentitet	Text	36	a globally unique identity for exchange objects	
skapad	DateTime	23	time when the object was created	
textstrang	Text	100	specifies the entire text without hyphenations	Text string corresponds to informational text or register text for decided place names.  Information texts that are hyphenated and have two map texts such as "Service" and "house" should have "Service house" written in the attribute <i>textstrang</i> . Abbreviated text

Attribute	Type	Length	Definition	Description
				should have the full text written in the attribute <i>textstrang</i> .
textkategori	Text	255	grouping is used to control the printing of text	The text category is used to control font style (normal/italic/bold/light) and colour (black/blue/green/...). Text type can also be used to control style.
textstorleksklass	Text	255	specifies which font size to use depending on the scale	In combination with text category, scale, and possibly text type, the printing of text is controlled. Value range is 1–10.
textlage	Integer	1	insertion point for text	The insertion point of the text is specified by a number between 1-9.  <i>Figure 3 Image that shows the insertion point of the text.</i> 
texttyp	Text	255	indicates type of text	Type of text according to value list. N= place name U= information text Text type can be used to control style
textsparrning	Integer	3	distance between letters	Stated in %. 100% is normal distance.
karttext	Text	100	cartographic text	The map text can be hyphenated or abbreviated. Information texts that are hyphenated and have two map texts such as “Service” and “house”

Attribute	Type	Length	Definition	Description
				should have "Service house" written in the attribute <i>textstrang</i> . Abbreviated text should have the full text written in the attribute <i>textstrang</i> .
textdelnr	Integer	1	specifies whether the text is hyphenated or not	Hyphenation part 0= not hyphenated otherwise 1–9 for each part string
textriktning	Floating point	6.2	rotation for text	Text rotation is specified in degrees (0.00 – 360.00, increasing anti-clockwise). 0.00=Unoriented text.

Table 121. Recommended font size

Font size	Text size class
5.25	1
6.0	2
7.0	3
8.0	4
9.0	5
10.0	6
12.0	7
14.0	8
16.0	9
20.0	10

## 6 List of changes

Table 122. Table for list of changes.

Version	Date	Reason and change from previous version
<b>1.9</b>	2024-02-27	Chapter 5.3.4 Church and Religious building has received a new definition, description, and comment.  List of change added.
<b>1.8</b>	2023-12-20	Chapter 5.2.1 Description and comment added for School Area. The phrase "No data has been collected yet" has been removed.  Description added, and examples modified in comment for Activity Park.
<b>1.7</b>	2023-11-20	First version in English.

## Appendix I Lantmäteriet's coverage area for mountain range information

Within Lantmäteriet's coverage area for mountain range information there is a slightly different object selection. Partly objects that are only presented within this area for example Sami cot, and partly objects that are presented in the whole of Sweden but have another selection in this area, for example watercourses.

For information in more detail, see the selection for the respective objects in chapter 5.

*Figure 4 Lantmäteriet's coverage area for mountain range information.*

