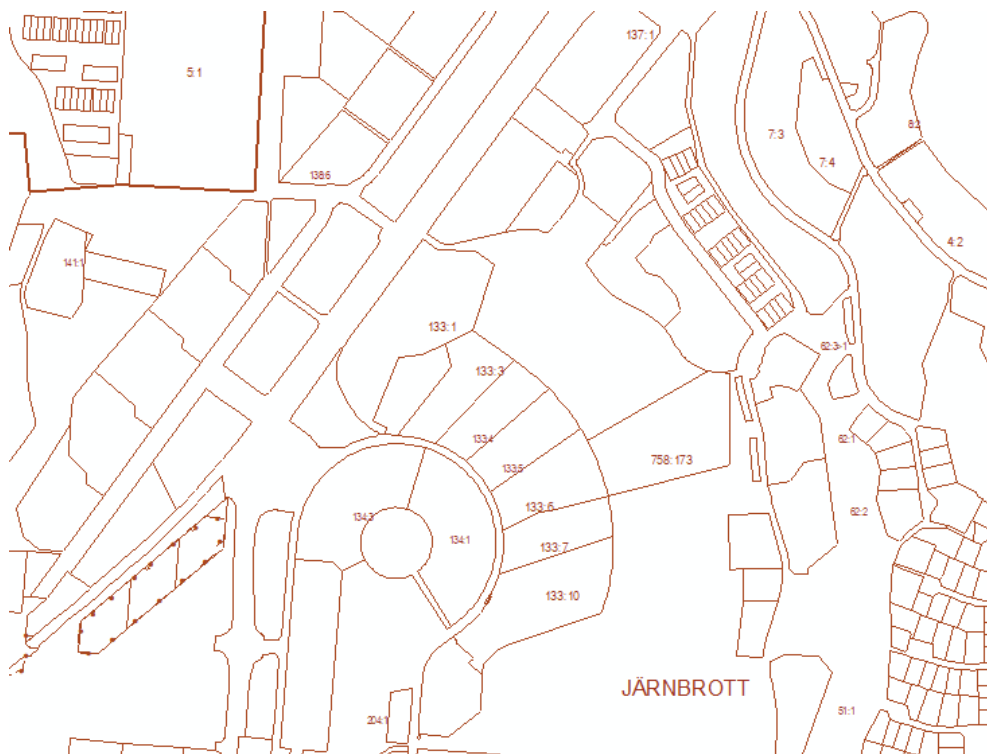


**PRODUCT DESCRIPTION**

# Cadastral Parcel Download, vector

DOCUMENT VERSION: 1.7

*Figure 1 Section from Cadastral Parcel Download, vector*



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## I General Description

### I.1 Contents

This document describes how Cadastral Parcel Download, vector is structured upon delivery. The contents are well suited for graphical presentation in the scale area of 1:5 000 – 1:20 000.

Cadastral Parcel Download, vector is based on Lantmäteriet's basic geographical databases, where the information has been collected with varying quality concerning positional uncertainty, contents, and update frequency.

The product contains real property information with property boundaries, administrative units, and text.

### I.2 Geographic Coverage

Nationwide.

### I.3 Geographic Section

Sweden, county, municipality, grid index, and optional polygon.

### I.4 Coordinate System

Plane: SWEREF 99 TM

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.

### I.5 Miscellaneous

The fishing areas are now included in the real property information and not as before, together with the rights.

## 2 Quality Description

The quality marking aims to provide information about the quality of stored objects. Based on the method of measurement, an expected positional accuracy has been set for the object types in Cadastral Parcel Download, vector.

The quality marking aims to provide information about the quality of stored objects. Based on the method of measurement, an expected positional accuracy has been set for the object types.

The objects in the database are stored with information about, amongst other things, history, and positional accuracy.

For more information about the various quality parameters used in the product description, refer to [HMK Ordlista \(pdf, in Swedish\)](#) and [HMK Geodatakvalitet \(pdf, in Swedish\)](#). For terms and definitions of these, refer to [termdatabasen Ekvator](#).

## 2.1 Purpose and Utility

Real property information in vector format is equivalent to the digital Cadastral Index Map and provides a good view over the real property information. It can be combined with information from the Real Property Register. The Cadastral Parcel Download, vector is suitably used in combination with Lantmäteriet's most detailed map product Topography 10 Download Download, vector.

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

You can:

- add and link your own information to objects on the map.
- integrate the map in your own system.
- Combine with information from the Real Property Register, for example information about owners, buildings, addresses and taxes.
- display information as required using the layer division.

## 2.2 Data Capture

### 2.2.1 LINEAGE

From the mid-1930s the production of the Economic maps began. The collection entailed field work where watercourses, for example, were paced and manually drawn onto various surfaces. This collection continued until 1977. The purpose of the mapping was, among other things, to create a mostly nationwide map to ease the work of finding the right documents in Lantmäteriet's cadastral archive. The geometric quality of the cadastral maps varies depending on when they were produced. For older maps a known coordinate system is often missing. Measurements and angles for a property boundary can instead be specified relative to existing objects in the terrain (boundary markers, house corners, etc.). There are property boundaries, especially in rural areas, that are measured during the 19<sup>th</sup> century. Generally, property boundaries in more built-up areas are of a later date and better quality.

During the years 1992 - 1997, the analogue information was digitized, and a first digital version of basic data was created. The goal was to create a nationwide database equal to the content of the Economic map. The version became almost nationwide. The only area missing was the mountain areas in the north. The data set was complemented and further developed with, for example, improved positional accuracy in the construction of Basic Geographical Data (GGD) in 1995-2004. The mountain areas were mapped between 2006-2012. Today, no fieldwork is conducted according to the previous model.

An important part of the work are quality controls of material acquired by cooperation agreements with for example municipalities.

Changes in administrative boundaries and real property information are made after decisions by authorities. The legal traceability of properties is documented in the Real Property Register. The cadastral procedure was documented in detail in a dossier with the associated cadastral map.

## 2.3 Maintenance

### 2.3.1 MAINTENANCE FREQUENCY

The real property information in the Cadastral Index Map is continuously updated, by Lantmäteriet and Municipal cadastral authorities, in combination with property formation. Updates to the Cadastral Index Map should be done no later than two days after registration in the Real Property Register.

The layer for the real property information is updated every night. Cadastral parcel Download, vector, ordered from Lantmäteriet is either gathered from pre-produced data or directly from this layer.

For pre-produced data, delivery of county and Sweden extractions with SWEREF99 TM or municipal extractions with local SWEREF zone is available. Other deliveries are made with extractions directly from the database.

The date is noted when each object is stored or changed in the database.

## 2.4 Data Quality

### 2.4.1 COMPLETENESS

The quality parameters for the quality theme completeness are “commission” and “omission”.

Since there are few measurements of completeness for the objects at Lantmäteriet, completeness is instead described in the product description as very high, high, and low.

Sweden’s real property information is not fully investigated. This means that there are objects that only exist in the dossiers but are not presented in the Real Property Register.

There are also real properties and joint properties presented with incomplete (part of a polygon) or a simplified geometry (point or line). Joint properties presented with lines are found in the layer **samfallighets\_linje**. Point occurrences are found in the layer **registerenhet\_punkt**.

There are areas that are not investigated and therefore lack information in the Real Property Register’s textual section, these are presented in the map and have an identity. Here, there are completely uninvestigated areas and areas that are known to be joint properties but have not been registered.

There are also older joint properties which are registered but lack geometry. These are not included in the delivery.

Many boundary points are missing in the Cadastral Index Map. This especially applies to older boundary points which have not been stored in the database. These can be found in dossiers and old registers. Efforts are under

way to supplement the database, partly with boundary points from municipalities and partly by transforming older boundary points into the correct coordinate system. Thus, completeness is continuously improving.

Boundary points have an attribute, **mtyp** (marking type), indicating the type of marking on the ground. This attribute exists for approximately 35% of boundary points.

#### 2.4.2 LOGICAL CONSISTENCY

The structure of point objects, line objects, and area objects has such requirements for geometric positions that it should be possible to easily create topology.

When storing objects in the database at Lantmäteriet, it is checked that the objects follow the geometric and topological rules that are in place, and that the information corresponds to OGC's (Open Geospatial Consortium) requirements for geometries. Value ranges and object types are also checked for validity before being stored in the database.

For objects included in the real property information, it is verified that they are located within the correct municipality and that the real property areas correspond to those in the Real Property Register.

There can be deficiencies in logical consistency, meaning that the data structure is not correct. An example are gaps in the real property information, which means that a correct polygon cannot be formed. The consequence is multiple ID points within an area. Logical consistency is continuously checked and corrected. Some errors are due to insufficient synchronization between databases cannot be avoided. However, they are corrected within a few days.

The coordinates of the boundary point and the coordinates of the breaking points on the boundary line should correspond.

#### 2.4.3 THEMATIC ACCURACY

The degree of accuracy in the classification of phenomena/objects is generally very high for real property information. Isolated errors may occur, for example, a misclassification where a municipality boundary has been coded incorrectly and become a property boundary.

#### 2.4.4 POSITIONAL UNCERTAINTY

Positional uncertainty describes how well a given position corresponds to the actual position in the terrain for the object that has been positioned in relation to the coordinate system. The positional accuracy of the property division can vary greatly depending on how the surveying has been done, ranging from manual digitalization from a map base to measurement with GPS in the field.

Positional uncertainty is stored in the form of a mean square error. The mean square error is specified with millimetre accuracy and refers to the positional uncertainty in relation to the coordinate system, e.g., SWEREF 99 TM, in which it is presented. In cases where the boundary points of a real property are correct positioned in relation to each other, i.e., high internal positional uncertainty, they may still be incorrect positioned in relation to the principal coordinate system, i.e., lower external positional uncertainty.

The mean square error is almost always calculated or estimated based on the measurement methods used in data capture (**metodplan**). The value may be considered as an assumed value for the applied measurement method. The value may be better or worse, but it provides a certain understanding of the positional uncertainty of boundaries and boundary points.

*Table 1 Value range for the attribute metodplan.*

<b>Code</b>	<b>Method type</b>	<b>Technique</b>	<b>Type of basis for digitization</b>
000	Unspecified	Unspecified	
100	Geodetic	Unspecified	
101	Geodetic	Total station	
102	Geodetic	GPS	
103	Geodetic	DGNSS	
104	Geodetic	Absolute GNSS	
107	Geodetic	Inertial technique	
108	Geodetic	Adjusted	
109	Geodetic	Network RTK	
110	Geodetic	Network DGNSS	
111	Geodetic	Static GNSS	
201	Photogrammetric	Analogue photogrammetry	
202	Photogrammetric	Analytical photogrammetry	

Code	Method type	Technique	Type of basis for digitization
203	Photogrammetric	Digital photogrammetry – analogue camera	
204	Photogrammetric	Unspecified technique	
205	Photogrammetric	Digital photogrammetry – analogue camera	
300	Digitalization	Unspecified	Unspecified
310	Digitalization	Table digitalization	Unspecified
314	Digitalization	Table digitalization	Orthophoto
320	Digitalization	Screen digitalization	Unspecified
324	Digitalization	Screen digitalization	Orthophoto
330	Digitalization	Scanning	Unspecified
500	Cartographic position	Unspecified	
600	Interpreted through JB 1:5		

For all line and point objects, a value for positional uncertainty is provided. Exceptions are ID points and polygon objects that are created based on boundary lines. If surveyed boundary exists, the boundary lines are assigned a mean square error derived from those boundary points. The principle is that the mean square error of the lines originates from the surveyed boundary point with the highest mean square error.

Every surveyed boundary point has information on positional uncertainty in the form of a mean square error (**xyfel**) in the plane. The mean square error is derived from the measurement methods used in data capture.

In the [Cadastral Index Map](#) there are some changes of the type of minor correction or quality improvement. These are not documented in a dossier. For boundary points, quality improvements can be traced through the attribute **kvalforb**, see also chapter 5.1.9. Other changes are tracked via date of change (**adat**).



In the work of quality improvement, the entire area is revisited and new measurements with higher positional accuracy are being made for certain points (**kvalforb=1**). The rest of the boundary points are then calculated based on the transformational relationship provided by the newly measured boundary points. The result of the calculation gives a basic mean square error (**kvalforb=2**).

The cultivation boundary has a positional uncertainty of about 50 m where it follows topography, the quality is higher where it follows watercourses or coincides with real property or district boundaries.

*Table 2 Requirements for the positional uncertainty of object types.*

<b>Object type</b>	<b>Requirements for positional uncertainty in plane (m)</b>
Territorial waters boundary	-
National boundary	5
County boundary	5
County boundary, 1:5	50
Municipal boundary	5
Municipal boundary, 1:5	50
Enclosing line for municipal boundary	-
Precinct district boundary	-
District boundary	5
District boundary, 1:5	50
Real property boundary	5
Real property boundary, 1:5	5
Real property shoreline	5
Enclosing line for real property information	-
Enclosing line for real property information 1:5	-

Object type	Requirements for positional uncertainty in plane (m)
Civil parish name boundary (Gotland)	5
Civil parish name boundary (Gotland)	50
Boundary for three-dimensional space	-

### 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 styles 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

The information is divided into different layers and are named according to theme categories and geometry type.

The layer name begins with product type and extent before the layer name when loaded into software.

Example: **fastighet\_xxxx registerenhet\_yta**, xxxx can be extent coordinates, municipality code or county code.

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

## 4 Layout and plotting of data

#### 4.1 On-screen presentation

The styling of the product is optimized for scales ranging from 1:5,000 to 1:50,000.

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.

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

#### 4.1.1 TEXT

When plotting text, the attribute **detaljtyp** determines the style and colour, while **thojd** determines the size. Other attributes used are **tjust** (insertion-point) and **trikt** (orientation). Text strings are not drawn with spaced characters. This is only indicated in the **tsparr** attribute as a percentage of how much the delivered text represents in relation to the original text. The recommended point size of the text is included as information in the **thojd** attribute.

Designation and area number in the text layers in chapter 5.1.11 and 5.1.12 have attribute text such as 5:2>2. On printed maps, designations and area numbers are presented as a two-line text:

$$\begin{array}{c} 5:2 \\ 2 \end{array}$$

To identify 3D real property text, blocks and units are enclosed with backslashes (\) in the **text** attribute in the text layers in chapter 5.1.11 and 5.1.12. Examples of this are: \5\>2 or \29:1\>2. Real properties and joint properties with uncertain boundaries (see description under the **registerenhet\_idpunkt** layer), have brackets around the designation, for example (2:4)>1. Real properties and joint properties that have been added through unofficial parcelling (see description in chapter 5.1.5 layer), are presented with square brackets around the designation, e.g. [5:8]>11.

## 4.2 Installation of fonts

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

## 5 Layer description and code list

This chapter describes, layer by layer, the included objects as well as the attributes used to described them.

### 5.1 Real property information

Lantmäteriet's [Real Property Register](#) contains information about all real properties in Sweden. One part of the Real Property Register is the digital Cadastral Index Map (DRK), where, according to Section 37 of the Real Property Register Ordinance, the following is presented:

- subdivision into counties and municipalities (administrative units)

- the extent of real property and joint property units (real property information)
- subdivision into civil parishes (historical classification)

The real property information in this vector product, corresponds to the boundaries in the Cadastral Index Map. The real property boundaries in the Cadastral Index Map have been established over a long historical period and have been created using various methods. This means that the data quality is quite varied. There are boundaries in the countryside that originate from land reforms in the mid-19th century. These boundaries may have a margin of error of several metres. Today we measure new real properties using satellite positioning, which can have an accuracy of a few centimetres.

The real property information are suitable for obtaining an overview of the relationships between real properties, but it is important to remember that the contents of the Cadastral Index Map **do not have any legal effect**. It is the cadastral dossier, along with decisions and protocols, that constitutes the legal documents. These documents are archived at Lantmäteriet.

If the real property division in this vector product is to be used as the basis for use or authority decision requiring the highest level of updating and positional accuracy, it is recommended to contact Lantmäteriet's customer centre to obtain access to the current plan decision documents. Refer to [Lantmäteriets website](#) for more information.

*Table 3 Layers included in Real property informationl.*

<b>Real property information</b>	<b>Layer name</b>
Real properties and joint properties (polygons)	registerenhet_yta
Boundaries (lines)	fastighetsgrans
Identity points for polygons (points)	registerenhet_idpunkt
Line-designated joint properties (lines)	samfallighet_linje
Point-designated real properties and joint properties (points)	registerenhet_punkt
Real property boundary points (points)	granspunkt
Administrative name (text) (scale 1:5,000 -1:20,000)	text_smaskalig
Register and area numbers (text)	text_registernummer

Real property information	Layer name
(Scale 1:5,000 - 1:20,000)	
Register and area numbers and administrative names (text) (In scale up to 1: 2,000)	text_storskalig

Table 4 Layers for administrative information.

Administrative unit	Layer name
County (polygons)	lansyta
Municipality (polygons)	kommunyta

Table 5 Layer containing a historical classification.

Historical division	Layer name
Civil parish (lines)	ovriga_admgranser

### 5.1.1 POLYGON LAYER WITH COUNTIES

Contains polygons for counties, including enclaves. An enclave is a county area within another county.

Table 6 Layer description for counties (Layer name: lansyta).

Detail type	Name	Description	Selection
LÄN	County polygon	SCB's numerical code for the county the name belongs to.	Completely included.

Table 7 Set of attributes for counties.

Attribute	Type	Length	Description
detaljtyp	Text	10	Code for detail type.
adat	DateTime	23	Date/time of the latest change Specified in the format: 2019-04-6T11:28:03.000
lankod	Text	2	County code
lanbok	Text	2	County letter

Attribute	Type	Length	Description
lannamn	Text	30	Name of county

### 5.1.2 POLYGON LAYER WITH MUNICIPALITIES

Contains polygons for municipalities, including enclaves. An enclave is a municipality area that lies within another municipality.

Table 8 Layer description for municipalities (Layer name: kommunyta).

Detail type	Name	Description	Selection
KOMMUN	Municipality polygon	SCB's numerical code for the municipality the name belongs to.	Completely included.

Table 9 Set of attributes for municipalities.

Attribute	Type	Length	Description
detaljtyp	Text	10	Code for detail type.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
lankod	Text	2	County code
kommunkod	Text	4	Municipality code
kommunnamn	Text	16	Municipality name

### 5.1.3 LINE LAYER WITH BOUNDARIES

Contains the same property division as in the Cadastral Index Map. Boundary lines are hierarchically coded from national boundaries to real property boundaries and form a polygon structure. Shorelines that have not been replaced by established real property boundaries are referred to as real property shorelines and are used to ensure an enclosed structure. A real property shoreline may divide a property into water and land areas or constitute an enclosing boundary for 1:5 water (according to the Land Code Chapter 1 Section 5).

Restrictions

PLEASE NOTE! Presented boundaries have no legal effect.

Circular arcs are delivered as line objects.

Table 10 Layer description for property boundaries (Layer name: fastighetsgrans).

Detail type	Name	Description	Selection
TERRGR	Territorial waters boundary	Boundary line in Swedish waters to other nations' territories. The boundary also constitutes county, district, and real property boundaries.	Included completely within the mapped area.
RIKSGR	National boundary	Boundary line showing Swedish national boundary to other nations. The boundary also constitutes county, district, and real property boundaries.	Included completely within the mapped area
LÄNSGR	County boundary	Boundary line showing county boundary, which is not simultaneously a national boundary. The county boundary also constitutes municipal, district and real property boundary.	Completely included.
LÄNS1:5	County boundary, 1:5	Boundary line showing non-established boundary of counties in a water area under the Land Code (SFS 1970:994) Chapter 1 Section 5. The boundary simultaneously constitutes non-established county, district, and real property boundaries.	Completely included.
KOMMUNGR	Municipality boundary	Boundary line showing municipal boundary, which is not simultaneously a county boundary or national boundary. The municipal boundary also constitutes a district and real property boundary.	Completely included.
KOMMUN1:5	Municipality boundary, 1:5	Boundary line showing non-established boundary of municipalities in a water area under the Land Code (SFS 1970:994) Chapter 1 Section 5. The boundary simultaneously constitutes non-established district and real property boundaries.	Included completely, except for presentation in public waters.

Detail type	Name	Description	Selection
KOMTÄTGR	Enclosing line for municipality boundary		
KVTRAKTGR	Precinct boundary	A precinct consists of real properties and joint properties with the same precinct name. A precinct boundary is the boundary line for the precinct. It is used as a delimitation against real properties/joint properties with different precinct names.	According to the specifications for the Digital Cadastral Index Map.
TRAKTGR	District boundary	Boundary line showing a district boundary, which is not simultaneously a municipal, county or a national boundary. Also constitutes real property boundaries. Delimits the district against public waters.	Included completely outside areas with incomplete presentation of real property division (AJOURGR, see chapter 5.1.8).
TRAKT1:5	District boundary, 1:5	Boundary line showing non-established boundary of a district in a water area under the Land Code (SFS 1970:994) Chapter 1 Section 5. The boundary is not simultaneously a municipal, county, or national boundary. Also constitutes non-established real property boundaries. On Gotland: Boundary between districts with the same civil parish name in the district name.	Included through assessment by the cadastral authority.
FASTGR	Real property boundary	Boundary line for real property, joint property units, or unofficial parcelling area, which is not simultaneously a district, precinct district, county, or national boundary. When the extent of the real property or joint property unit is unclear against the water, the boundary is instead a real property shoreline.	Included completely outside areas with incomplete presentation of real property division (AJOURGR, see chapter 5.1.8).



Detail type	Name	Description	Selection
FAST1:5	Real property boundary, 1:5	Boundary line showing non-established boundary of a real property in a water area under the Land Code (SFS 1970:994) Chapter 1 Section 5. The boundary is not simultaneously a district, municipal, county, or national boundary.	Included through assessment by the cadastral authority.
FASTSTR	Real property shoreline	Boundary line between a real property or joint property units land area and a water area or former water area (filled area). Real property shoreline is used in cases where the extent of the real property or joint property unit is unclear or when there is no boundary presented. The real property shoreline is used to form a closed figure in the real property division. The real property shore may coincide with the shoreline.	Included through assessment by the cadastral authority.
FASTTÄTGR	Enclosing line for real property division.		
FAST1:5TÄT	Enclosing line for real property division 1:5		
SOCKNAGR	Civil parish name boundary (Gotland)	Boundary line showing the civil parish name boundary between districts with different civil parish names on Gotland. Used instead of district boundary to distinguish between districts with different civil parish names in the district name.	Completely included. Only used on Gotland.
SOCKNA1:5	Civil parish name boundary 1:5 (Gotland)	Boundary line showing non-established boundary in a water area under the Land Code (SFS 1970:994) Chapter 1 Section 5, between districts with different civil parish names on Gotland. Used instead of the district	Included through assessment by the cadastral authority. Only used on Gotland.

Detail type	Name	Description	Selection
		boundary 1:5 to distinguish areas with different civil parish names in the district name.	
3DGR	Boundary for three-dimensional space.	Boundary line for three-dimensional real property.	Included through assessment by the cadastral authority.
FISKEGR	Fishing boundary	Boundary line for fishing property.	Included if the fishing is in the Real Property Register's textual section.
FISKETÄTGR	Enclosing line for fishing		

Table 11 Set of attributes for property boundaries.

Attribute	Type	Length	Description
internid	Integer	9	Internal identity in Lantmäteriet's basic data storage = birth number.
detaljtyp	Text	10	Code for detail type.
gdat	DateTime	23	Date/time when the object was created. Specified in format: 2019-04-26T11:28:03.000.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
xyfel	Floating-point	6,3	Mean square error in specified measurement method. Specified in unit meter. 0 is treated as a null value.
metodplan	Integer	5	Method of measurement in plane; refer to table 1 in chapter 2.2.4.
flyghojd	Integer	7	Flight altitude during photogrammetric data collection.
undskala	Integer	7	Scale factor of the base material during digitization.

Attribute	Type	Length	Description
knid	Integer	4	Municipal code, geographically derived.

#### 5.1.4 POLYGON LAYER WITH REAL PROPERTIES AND JOINT PROPERTIES

Contains polygons for real properties and joint properties. When creating polygons for the real property information, the boundaries and identity points stored in the **fastighetsgrans** and **registerenhet\_idpunkt** layers are used. Polygon creation is done by municipality and comprehensive polygons are created. Quality controls are performed to provide information about the quality of the polygon regarding structure. The geometrical quality of boundaries and ID points, as well as the conformity of the formed polygon with FR is checked:

The geometrical quality of real property polygons is assessed using the **ytkval** attribute. Polygons with ytkval=2 should not be included in the formation of areas. If it is an unresolved area containing identity points for joint properties within the boundary line, the polygon of the unresolved area will be repeated for each joint property unit. These repeated polygons should not be included in the formation of areas. Refer to detailed description in Table 14.

#### Restrictions

In the case of deliveries divided into municipalities, municipality enclaves found within another municipality are not included.

Unresolved and unregistered areas have special identities. The **externid** of these areas consists of <county municipal code>:<district- block district name>:<type of unresolved area>:<serial number>, for example.

1315:ÖSTTEG:SAMF:11. Refer to section 5.1.5.

Areas that do not belong to any real property, are not registered in the textual part of the Real Property Register and could not be given any association to a municipality are therefore assigned the code 9999 in the **kommunkod** attribute and the text OKÄND (unknown) in the attribute **kommunnamn**.

Table 12 Layer description for real properties and joint properties (Layer name: registerenhet\_yta).

Detail type	Name	Description	Selection
FASTIGHET	Real property area	Area with designation.	Included completely outside areas with incomplete reporting of real property information (AJOURGR, see chapter 5.1.8).
SAMF	Joint property unit	Area with designation.	Included completely outside areas with incomplete reporting of real property

Detail type	Name	Description	Selection
			information (AJOURGR, see chapter 5.1.8).
FASTO	Unresolved real property area	Area without designation.	Completely included.
SAMFO	Unresolved joint property unit	Area without designation.	Completely included.
OSPEC	Unspecified polygon, often code on incorrect polygon		
3DFASTIGH	Three-dimensional real property space	Area with designation.	Completely included.
3DSAMF	Three-dimensional space for joint property unit	Area with designation.	Completely included.
FISKELOTT	Separate fishing lot	Area where the ownership for the fishing is separate from ownership of water.	Included if fishing is in the Real Property Register's textual section.
FISKESAMF	Joint fishery unit	Area where fishing is joint.	Included if fishing is in the Real Property Register's textual section.

Table 13 Set of attributes for real properties and joint properties.

Attribute	Type	Length	Description
objekt_id	Text	36	Globally unique identity (UUID) for each register unit.
externid	Text	64	External ID in Lantmäteriet's basic database. Obtained from the <b>registerenhet_idpunkt</b> layer.
detaljtyp	Text	10	Code for detail type. (FASTIGHET, SAMF, FASTO, SAMFO)
kommunkod	Text	4	County and municipality code (2180)

Attribute	Type	Length	Description
kommunnamn	Text	16	Name of municipality (GÄVLE)
trakt	Text	40	District name (BERGA)
blockenhet	Text	9	Block and unit (1:3).
omnr	Integer	4	Area number (3). 0 is treated as a null value.
fastighet	Text	54	Real property area: District_block:unit_area number (BERGA 1:3>3)
ytkval	Integer	2	Geometric polygon quality Values: 1, 2, 6. 0 is treated as a null value. Refer to detailed description below.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
omrtyp	Text	3	See detailed description below.

Table 14 Value range for attribute ytkval.

Code	Description	Comment
1	The polygon is geometrically correct.	
2	The polygon has geometric duplicates.	There are multiple polygons with identical geometries, one for each point in the <b>registerenhet_idpunkt</b> layer, and each polygon receives the identity of the corresponding point.
6	The polygon is not geometrically correct	Polygons that contain errors in the structure such as gaps, overlaps, lack of ID point or are otherwise incorrect. These polygons may also have multiple ID points or lack identity.

Table 15 Value range for the attribute omnr.

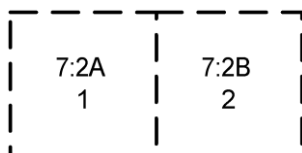
Code	Description	Comment
OSO	Unregistered joint property	Joint property not found in the real property register.
SF	Joint fishery unit	Area of the type joint fishing.
OOO	Unresolved Area	The area is unresolved and does not exist in the property register.
	Null value	Other areas.

### 5.1.5 POINT LAYER WITH ID POINTS FOR JOINT PROPERTIES AND REAL PROPERTIES

Layer containing ID points for real properties and joint properties. When forming areas of real property, attribute information is retrieved from points with the detail types FASTID, SAMFID, 3DFASTID, 3DSAMFID, FAS-TOID and SAMFOID.

The ID points for buildings and joint properties may have parcel letters (a letter) or area information. Parcel letters belong to unofficial parcels which are part of a real property (or part of a joint property unit) that has been formed by private land division. The letter is in the third position after the area number in **externid**, for example, 1489>BERGA>7:2>1>>A and 1489>BERGA>7:2>2>>B.

*Figure 2. Each area of unofficial parcels has a unique register designation through one unofficial parcel letter.*



Area information is found in the fourth position after the area number in **externid**. Area information can have the following values:

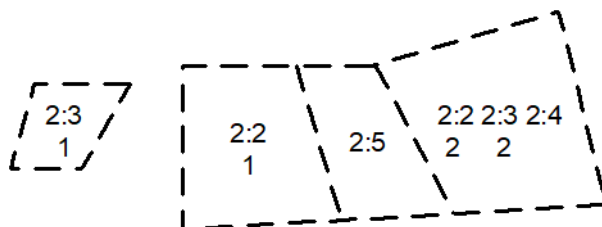
- A Part of an unregistered joint property unit
- J Railway property
- O Uncertain position: designation is presented in brackets, e.g. (3:5)
- S Unofficial parcel within a joint property unit or area not asserted in established maps (unofficial land exchange); the designation is presented within square brackets, e.g. [2:4]

- U Three-dimensional space, designation is presented within backslashes, e.g., \1:3\  
 Z Condominium, designation is presented within backslashes, e.g., \1:4\  
 \1:4\

ID points with an "A" as area information are part of the unregistered joint property unit. 1266>FULLTOFTA>14:1>1>>>A>1. Information on ownership in unregistered joint properties is not always complete.

ID points marked with an "A" as area information indicate a share in an unregistered joint property. For areas classified as share-property areas, there is no extent on the map other than a point location within an unresolved joint property or unresolved property. The point indicates that the property has a share within the unresolved area.

*Figure 3. The real properties 2:2, 2:3 and 2:4 have a share in an unregistered joint property unit and have "A" in the EXTERNID for the shared area.*

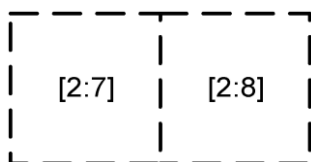


ID points with a "J" as area information are real property used for railway purposes, for which the boundaries of the real property are not fully presented.

Area information "O" is only used for real properties and joint properties presented with a point, as well as joint properties presented with lines.

Area information "S" is used for unofficially parcelled joint properties and unofficial land exchange (the area is not asserted on an established map).

*Figure 4. An unofficially parcelled property, designation within square brackets.*



There are also unregistered and unresolved areas with ID points of the types SAMFOID and FASTOID. These may be unregistered joint properties, so-called "d areas" that could not be mapped in the 1:10,000 scale when the economic map was created, or areas that are unresolved for other reasons. These areas have a different type of external ID consisting of <county municipal code>:<district block name>:<type of unresolved area>:<serial number>, for example 1315:ÖSTTEG:SAMF:11.

Restrictions

The coordinate position of ID points usually coincides with the textual part of the Real Property Register, but deviations may occur. Commissions and omissions of ID points may occur rarely in a real property or joint property unit.

ID points for real properties that are not registered in the Real Property Register may lack information about the municipality to which they belong. Therefore, these points are given the code 9999 in the **kommunkod** attribute and the text OKÄND (unknown) in the **kommunnamn** attribute.

Fishing is also included in the layer.

*Table 16 Layer description for id points (Layer name: registerenhet\_idpunkt)*

Detail type	Name	Description	Selection
3DSAMFID	Three-dimensional space for joint property unit	ID point for 3D joint property unit.	Completely included.
FASTOID	Real property unit without identity	ID point for area without identity in the Real Property Register.	Completely included.
SAMFID	Joint property unit	ID point for joint property unit.	Completely included.
SAMFOID	Joint property unit without identity	ID point for area without identity in the Real Property Register.	Completely included.
3DFASTID	Three-dimensional space for real property unit	ID point for 3D real property unit.	Completely included.
FASTID	Real property unit	ID point for real property unit	Completely included.
FISKEID	Standalone fishing	ID point for areas of the type separate fishing lot, land register fishing and joint fishery unit.	Included if the fishing is in the Real Property Register's textual section.

*Table 17 Set of attributes for id points.*

Attribute	Type	Length	Description
objekt_id	Text	36	Globally unique identity (UUID) for each register unit.



Attribute	Type	Length	Description
externid	Text	64	External identity in Lantmäteriet's basic database; see examples and clarifying text above.
detaljtyp	Text	10	Code for detail type.
kommunkod	Text	4	County and municipality code in the county (2180)
kommunnamn	Text	16	Name of municipality (GÄVLE)
trakt	Text	40	District name (BERGA)
blockenhet	Text	9	Precinct and unit (1:3)
omnrnr	Integer	4	Area number (3). 0 is treated as a null value
fastighet	Text	54	Real property unit: District_block:unit_area number (BERGA 1:3>3)
omrtyp	Text	30	Value range: Condominium property, 3D spaces, Unregistered joint property unit, NULL
omrinf	Text	35	Value range: Part of unregistered joint property unit, Unofficially parcelled, Railway property, NULL
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000

#### 5.1.6 LINE LAYER WITH JOINT PROPERTY UNITS AND FISHING PRESENTED WITH A CENTRE LINE

Contains generalised joint properties presented with a centre line. This means that there is no complete boundary representation of the joint properties in the database.

*Table 18 Layer description for centerline-presented joint property units and fishing (Layer name: samfal-lichtet\_linje)*

Detail type	Name	Description	Selection
SAMF	Joint property unit, templated	Incomplete boundary presentation.	Completely included.
FISKELOTT	Separate fishing lot	Area where the ownership for the fishing is separate from ownership of water.	Included if fishing is indicated in the Real Property Register's textual section.

Detail type	Name	Description	Selection
FISKESAMF	Joint fishery unit	Area where the fishing is joint.	Included if fishing is indicated in the Real Property Register's textual section.

Table 19 Set of attributes for centerline-presented joint properties and fishing.

Attribute	Type	Length	Description
internid	Integer	9	Internal identity in Lantmäteriet's basic data storage.
objekt_id	Text	36	Globally unique identity (UUID) for each register unit.
externid	Text	64	External identity in Lantmäteriet's basic database. External ID is missing for certain items.
detaljtyp	Text	10	Code for detail type.
kommunkod	Text	4	County and municipality code in the county (2180)
kommun-namn	Text	16	Name of municipality (GÄVLE)
trakt	Text	40	District name (BERGA)
blockenhet	Text	9	Block and unit (1:3)
omnrnr	Integer	4	Area number (3). 0 is treated as a null value.
fastighet	Text	54	Real property unit: District_block:unit_area number (BERGA 1:3>3)
gdat	DateTime	23	Date/time when the object was created. Specified in format: 2019-04-26T11:28:03.000.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
xyfel	Floating-point	6,3	Mean square error in specified measurement method. Specified in unit meter. 0 is treated as a null value.
metodplan	Integer	5	Method of measurement in plane; refer to table 1 in chapter 2.2.4.

Attribute	Type	Length	Description
flyghojd	Integer	7	Flight altitude during photogrammetric data collection.
undskala	Integer	7	Scale factor of the base material during digitization.
knid	Integer	4	Municipal code, geographically derived.

### 5.1.7 POINT LAYER WITH JOINT PROPERTY UNITS AND REAL PROPERTIES PRESENTED AS POINTS

This layer includes real property area, joint property unit and private fishing that are generally presented as points (undefined position).

*Table 20 Layer description for joint property units and real properties presented as points (Layer name: registerenhet\_punkt).*

Detail type	Name	Description	Selection
FASTIGHET	Real property unit	Point object with undefined position.	Completely included.
SAMF	Joint property unit	Point object with undefined position.	Completely included.
FISKELOTT	Separate fishing lot	Point object with undefined position.	Included if the fishing is in the Real Property Register's textual section.
FISKESAMF	Joint fishery unit	Point object with undefined position.	Included if the fishing is in the Real Property Register's textual section.

*Table 21 Set of attributes for joint property units and real properties presented as points.*

Attribute	Type	Length	Description
internid	Integer	9	Internal identity in Lantmäteriet's basic data storage.
objekt_id	Text	36	Globally unique identity (UUID) for each register unit.
externid	Text	64	External identity in Lantmäteriet's basic database
detaljtyp	Text	10	Code for detail type.

Attribute	Type	Length	Description
kommunkod	Text	4	County and municipality code in the county (2180)
kommun-namn	Text	16	Name of municipality (GÄVLE)
trakt	Text	40	District name (BERGA)
blockenhet	Text	9	Block and unit (1:3)
omrnr	Integer	4	Area number (3). 0 is treated as a null value.
fastighet	Text	54	Real property unit: District_block:unit_area number (BERGA 1:3>3)
omrinf	Text	35	Value range: Part in unregistered joint property unit, Unofficially parcelled, Railway property, NULL
gdat	DateTime	23	Date/time when the object was created. Specified in format: 2019-04-26T11:28:03.000.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
xyfel	Floating-point	6,3	Mean square error in specified measurement method. Specified in unit meter. 0 is treated as a null value.
metodplan	Integer	5	Method of measurement in plane; refer to table 1 in chapter 2.2.4.
flyghojd	Integer	7	Flight altitude during photogrammetric data collection.
undskala	Integer	7	Scale factor of the base material during digitization.
knid	Integer	4	Municipal code, geographically derived.

#### 5.1.8 LINE LAYER WITH OTHER ADMINISTRATIVE BOUNDARIES

Includes other area divisions within the administrative division. Civil parish boundaries represent the parishes from the earlier real property register, i.e., the civil parish subdivision that was applicable on December 31, 1999.

The maintenance boundary form enclosed areas in which the real property information is incomplete.

The cultivation boundary is the administrative boundary that divides the mountain regions from the rest of the country. The Reindeer Husbandry Act prescribes during which time periods the reindeers may be below the cultivation boundary.

Table 22 Layer description for other administrative boundaries (Layer name: *ovriga\_admgranser*).

Detail type	Name	Description	Selection
AJOURGR	Boundary for incomplete real property presentation		Completely included.
SOCKENGR	Civil parish boundary	Boundary for the civil parish information	Completely included.
ODLINGSGR	Cultivation boundary	Boundary for reindeer grazing rights	Completely included.

Table 23. Set of attributes for other administrative boundaries

Attribute	Type	Length	Description
detaljtyp	Text	10	Code for detail type.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
xyfel	Floating-point	6,3	Mean square error in specified measurement method. Specified in unit meter. 0 is treated as a null value.

### 5.1.9 POINT LAYER WITH PROPERTY BOUNDARY POINTS

The layer contains property boundary points, witness marks and national boundary markers.

Property boundary points refer to a point established in a legal property decision that defines the line of the boundary between areas.

In the first chapter of the Land Code on Real Properties and their boundaries, the following is stated:

*Section 3 Boundaries that have been legally established have the marking on the ground according to the regulations prescribed by law. If the marking can no longer be determined with certainty, the boundary has the alignment that can be assumed based on the cadastral plan, as well as documents, ownership, and other circumstances. If the boundary line has not been marked on the ground according to the regulations prescribed by law, the boundary has the alignment described by maps and documents.*

For each property boundary point there is a boundary line, and on this boundary line, there is a break point in the same position as the surveyed boundary point. There may be occasional surveyed points that do not have any connecting boundary line.

Property boundary points are stored with an external ID. This external ID is nationally unique and consists of municipal code, area, type, and serial number.

Example:

1730EDAS\*GRÄ\*1348

*Municipal code + area \* type \* serial number*

It is also possible to place boundary marks in the form of witness marks. Like standard surveyed boundary points, these witness marks are legally determined and thus have legal force. These also have unique external identities in the same way as surveyed boundary points. Instead of GRÄ, the type FMK is specified in the designation.

Example:

1480BODA\*FMK\*1044

*Municipal code + area \* type \* serial number*

A national boundary marker is usually a marker of the national boundary position on land, but they may also be in water. There is always a national boundary connected to every boundary marker. Some national boundary markers stored in the Cadastral Index Map also have height values. All national boundary markers have a unique designation that consists of a digit, Roman numeral and/or letter. An example of the designation of a national boundary marker is Rr 34 A. There may also be a name for a national boundary marker, for example Treriksröset.

*Table 24 Layer description for surveyed boundary points (Layer name: granspunkt).*

<b>Detail type</b>	<b>Name</b>	<b>Description</b>	<b>Selection</b>
GRÄ	Property boundary point	Boundary points belonging to real property boundaries.	Included if the boundary point is present in the digital Cadastral Index Map.
FMK	Witness mark	Boundary marking where for some reason it is not possible to mark a boundary point for a property boundary.	Included if the boundary point is present in the digital Cadastral Index Map.
RIKSRÖSE	National boundary marker	Boundary points located on the national boundary.	Completely included.

Table 25 Set of attributes for property boundary points.

Attribute	Type	Length	Description
internid	Integer	9	Internal identity in Lantmäteriet's basic data storage.
externid	Text	64	Boundary point designation consists of area*type*serial number, e.g., 21OCK*GRÄ*7202. Designation for a national boundary marker consists of Rr and serial number, for example Rr 108.
detaljtyp	Text	10	Code for detail type.
mtyt	Text	6	Type of marking, according to value quantity, see table 27.
mlage	Integer	2	Marking position 0 = No information 1 = On breakpoint 2 = On polygon 3 = Detached
gdat	DateTime	23	Date/time when the object was created. Specified in format: 2019-04-26T11:28:03.000.
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000
xyfel	Floating-point	6,3	Mean square error in specified measurement method. Specified in unit meter. 0 is treated as a null value.
metodplan	Integer	5	Method of measurement in plane; refer to table 1 in chapter 2.2.4.
kvalforb	Integer	2	Quality improvement measure: refer to detailed description in table 26.
flyghojd	Integer	7	Flight altitude during photogrammetric data collection.
undskala	Integer	7	Scale factor of the base material during digitization.
knid	Integer	4	Municipal code, geographically derived.

Table 26 Value range for attribute kvalforb.

Code	Description	Comment
0	No information	
1	Remeasurement	The point's location information has been improved by conducting a new measurement.
2	Transformation/Adjustment	The point's location information has been improved by transformation or adjustment against points of higher positional accuracy.

Table 27 Value range for the attribute mtyyp.

Code	Description
	No information
db	Peg in rock
dg	Peg in concrete casting
dh	Peg in building
dm	Peg in wall
ds	Peg in earthbound stone
fr	Boundary mark (Five stone cairn)
fs	Fixed signal (photogrammetry)
gr	Glazed pipe
graf	Graphic point
hb	Drill-hole in rock
hg	Drill hole in concrete casting
hs	Drill hole in earthbound stone
jk	Iron bracket



Code	Description
js	Iron bar
kv	Bracket for wall marker
mp	Target point (spire etc.)
ms	Brass screw
om	Unmarked boundary point
rb	Pipe in rock
rg	Pipe in concrete casting
rgd	Pipe in casting with cover
rm	Pipe in ground
rmd	Pipe in ground with cover
rn	Hoar stone (boundary stone)
rs	Pipe in earthbound stone
sa	Spike in asphalt
sb	Spike in rock
sg	Spike in concrete casting
ss	Spike in earthbound stone
st	Fence post
tp	Wooden pole

#### 5.1.10 TEXT LAYER WITH ADMINISTRATIVE NAMES, SMALL-SCALE REPRESENTATION

Contains cartographically placed administrative names and informational text. The text is adapted in placement and size for representation in scales 1:5,000 - 1:20,000. Arial is recommended as the font.

Clarification regarding district names and precinct names:

The property unit designation includes district names. In built-up areas, the designation may contain precinct district names instead of district names. If the property unit designation is based on precinct district names, the municipality should divide the precinct land into areas and name them. Such named areas constitute precinct. The municipality decides on precinct division and precinct names, while the Land Survey Authority decides on district names.


#### Restrictions

Detail type F-UPPLYTX may incorrectly contain the names of the easements and utility easements.

Table 28 Layer description for text with administrative names (Layer name: text\_smaskalig).

Detail type	Name	Description	Selection
LÄNTX	County name	Text for the name.	Only on county enclaves.
KOMMUNTX	Municipality name	Text for the name.	Only on municipality enclaves.
SOCKENTX	Civil parish name	Text for the name.	Only on civil parish enclaves.
TRAKTTX	District name	Text for the name.	Included for overall presentation.
KVTRAKTTX	Precinct name	Text for the name.	Included for overall presentation.
F-UPPLYTX	Informational text for real property information		Included if the informational text is in the Cadastral Index Map.

Table 29 Set of attributes for text with administrative names.

Attribute	Type	Length	Description
detaljtyp	Text	10	Code for detail type.
trikt	Floating-point	6,2	Text direction. Specified in unit degrees. (0.00 – 360.00, increasing counter-clockwise). 0.00=Undirected text
tjust	Integer	2	Insertion points of text (1-9). Insertion points in decimal points. 

Attribute	Type	Length	Description
thojd	Integer	6	Text height in the form of code. 0 is treated as a null value. Refer to table 30 for which font sizes are used when the text is adapted for presentation in a scale of 1:10,000.
text	Text	64	Text string
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000

Table 30 Value range for the attribute thojd.

thojd	size
6	6 points (1.59 mm)
8	8 points (2.12 mm)
10	10 points (2.65 mm)
12	12 points (3.18 mm)
14	14 points (3.71 mm)
16	16 points (4.24 mm)
18	18 points (4.77 mm)
20	20 points (5.30 mm)
30	30 points (7.95 mm)

#### 5.1.11 TEXT LAYER WITH REGISTER AND AREA NUMBERS, SMALL-SCALE REPRESENTATION

Includes cartographically placed designations and area numbers, such as 1:2. The size and positioning of the text is suitable for presentation at scales between 1:5,000 and 1:20,000.


We recommend using Arial as the font.

Table 31 Layer description for register and area numbers, small-scale representation (Layer name: text\_registernummer)

Detail type	Name	Description	Selection
REGNRTX	Designation	Text for block:unit and area number	Included for over-view presentation.

Detail type	Name	Description	Selection
REGNRTXHA	Designation for unofficially parcelled joint property units	Text for block:unit and area number. Enclosed within square bracket [ ]	Included for overview presentation
REGNRTXPA	Designation for real properties/joint properties with uncertain locations.	Text for block:unit and area number. Enclosed within parenthesis ( )	Included for overview presentation
3DREGNRTX	Designation for 3D space.	Text for block:unit and area number. Enclosed within backslashes \ \	Included for overview presentation

Table 32 Set of attributes for register and area numbers, small-scale representation.

Attribute	Type	Length	Description
detaljtyp	Text	10	Code for detail type.
trikt	Floating-point	6,2	Text direction. Specified in unit degrees. (0.00 – 360.00, increasing counter-clockwise). 0.00=Undirected text
tjust	Integer	2	Insertion points of text (1-9). Insertion points in decimal points. 
thojd	Integer	6	Text height in the form of code. 0 is treated as a null value. Refer to table 30 for which font sizes are used when the text is adapted for presentation in a scale of 1:10,000.
text	Text	64	Text string
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000

#### 5.1.12 TEXT LAYER WITH TEXTS FOR LARGE-SCALE REPRESENTATION


Contains cartographically placed names in administrative division and real property information, designations, area numbers as well as informative text. This includes names of district, municipalities, civil parishes and the designation and area number. The text is positioned and sized for displays in scales > 1:2,000.

Arial is recommended as the font.

Table 33 Layer description for large-scale text (Layer name: text\_storskalig)

Detail type	Name	Description	Selection
LÄNTX	County name	Text for the name.	Only on county enclaves.
KOMMUNTX	Municipality name	Text for the name.	Only on municipality enclaves.
SOCKENTX	Civil parish name	Text for the name.	Only on civil parish enclaves.
TRAKTTX	District name	Text for the name.	Completely included.
KVTRAKTTX	District quarter name	Text for the name.	Completely included.
REGNRTX	Designation	Text for block:unit and area number.	Completely included.
REGNRTXHA	Designation for unofficially parceled joint property units	Text for block:unit and area number. Enclosed within square bracket [ ]	Completely included.
REGNRTXPA	Designation for real properties/joint properties with uncertain locations.	Text for block:unit and area number. Enclosed within parenthesis ( )	Completely included.
F-UPPLYTX	Information text for real property information		Included if the information text is in the Cadastral Index Map.
3DREGNRTXP	Designation for 3D space	Text for block:unit and area number. Enclosed within backslashes \\	Completely included.
3DREGNRTXH	Designation for 3D space	Text for block:unit and area number. Enclosed within backslashes \\	Completely included.

Table 34 Set of attributes for large-scale text.

Attribute	Type	Length	Description
detaljtyp	Text	10	Code for detail type.
trikt	Floating-point	6,2	Text direction. Specified in unit degrees. (0.00 – 360.00, increasing counter-clockwise). 0.00=Undirected text
tjust	Integer	2	Insertion points of text (1-9). Insertion points in decimal points. 
thojd	Integer	6	Text height in the form of code. 0 is treated as a null value. Refer to table 30 for which font sizes are used when the text is adapted for presentation in a scale of 1:10,000.
text	Text	64	Text string
adat	DateTime	23	Date/time of the latest change. Specified in the format: 2019-04-6T11:28:03.000

## 6 List of change

*Tabell 35 List of change*

<b>Ver- sion</b>	<b>Date</b>	<b>Reason and change from previous version</b>
1.7	2024-01-11	First established version in English.