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ANNEX II

REQUIREMENTS FOR SPATIAL DATA THEMES LISTED IN ANNEX I TO DIRECTIVE 2007/2/EC

1. COORDINATE REFERENCE SYSTEMS

1.1. **Definitions**

In addition to the definitions set out in Article 2, the following definitions shall apply:
— 'datum' means a parameter or set of parameters that define the position of the origin, the scale, and the orientation of a coordinate system, in accordance with EN ISO 19111,
— 'geodetic datum' means a datum describing the relationship of a coordinate system to the Earth, in accordance with EN ISO 19111,
— 'coordinate system' means a set of mathematical rules for specifying how coordinates are to be assigned to points, in accordance with EN ISO 19111,
— 'coordinate reference system' means a coordinate system which is related to the real world by a datum, in accordance with EN ISO 19111. This definition includes coordinate systems based on geodetic or Cartesian coordinates and coordinate systems based on map projections.
— 'map projection' means a change of coordinates, based on a one-to-one relationship, from a geodetic coordinate system to a plane, based on the same datum, in accordance with EN ISO 19111,
— 'compound coordinate reference system' means a coordinate reference system using two other independent coordinate reference systems, one for the horizontal component and one for the vertical component, to describe a position, in accordance with EN ISO 19111,
— 'geodetic coordinate system' means a coordinate system in which position is specified by geodetic latitude, geodetic longitude and (in the three-dimensional case) ellipsoidal height, in accordance with EN ISO 19111[**F1**,]
— [**F2**'mean sea level' (MSL) means the average height of the surface of the sea at a tide station for all stages of the tide over a 19-year period, usually determined from hourly height readings measured from a fixed predetermined reference level (chart datum),
— 'lowest astronomical tide' (LAT) means the lowest tide level which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.]

Textual Amendments
  F1 Substituted by Commission Regulation (EU) No 1253/2013 of 21 October 2013 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services.
  F2 Inserted by Commission Regulation (EU) No 1253/2013 of 21 October 2013 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services.

1.2. **Datum for three-dimensional and two-dimensional coordinate reference systems**

For the three-dimensional and two-dimensional coordinate reference systems and the horizontal component of compound coordinate reference systems used for making spatial data sets available, the datum shall be the datum of the European Terrestrial Reference System 1989

(ETRS89) in areas within its geographical scope, or the datum of the International Terrestrial Reference System (ITRS) or other geodetic coordinate reference systems compliant with ITRS in areas that are outside the geographical scope of ETRS89. Compliant with the ITRS means that the system definition is based on the definition of the ITRS and there is a well documented relationship between both systems, according to EN ISO 19111.

1.3. Coordinate Reference Systems

Spatial data sets shall be made available using at least one of the coordinate reference systems specified in sections 1.3.1, 1.3.2 and 1.3.3, unless one of the conditions specified in section 1.3.4 holds.

1.3.1. *Three-dimensional Coordinate Reference Systems*

— Three-dimensional Cartesian coordinates based on a datum specified in 1.2 and using the parameters of the Geodetic Reference System 1980 (GRS80) ellipsoid.

— Three-dimensional geodetic coordinates (latitude, longitude and ellipsoidal height) based on a datum specified in 1.2 and using the parameters of the GRS80 ellipsoid.

1.3.2. *Two-dimensional Coordinate Reference Systems*

— Two-dimensional geodetic coordinates (latitude and longitude) based on a datum specified in 1.2 and using the parameters of the GRS80 ellipsoid.

— Plane coordinates using the ETRS89 Lambert Azimuthal Equal Area coordinate reference system.

— Plane coordinates using the ETRS89 Lambert Conformal Conic coordinate reference system.

— Plane coordinates using the ETRS89 Transverse Mercator coordinate reference system.

1.3.3. *Compound Coordinate Reference Systems*

1. For the horizontal component of the compound coordinate reference system, one of the coordinate reference systems specified in section 1.3.2 shall be used.

2. For the vertical component, one of the following coordinate reference systems shall be used:

— For the vertical component on land, the European Vertical Reference System (EVRS) shall be used to express gravity-related heights within its geographical scope. Other vertical reference systems related to the Earth gravity field shall be used to express gravity-related heights in areas that are outside the geographical scope of EVRS.

— [**F1**For the vertical component in the free atmosphere, barometric pressure, converted to height using ISO 2533:1975 International Standard Atmosphere, or other linear or parametric reference systems shall be used. Where other parametric reference systems are used, these shall be described in an accessible reference using EN ISO 19111-2:2012.]

— [**F2**For the vertical component in marine areas where there is an appreciable tidal range (tidal waters), the Lowest Astronomical Tide (LAT) shall be used as the reference surface.

— For the vertical component in marine areas without an appreciable tidal range, in open oceans and effectively in waters that are deeper than 200 meters, the Mean Sea Level (MSL) or a well-defined reference level close to the MSL shall be used as the reference surface.]

1.3.4. *Other Coordinate Reference Systems*

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Exceptions, where other coordinate reference systems than those listed in 1.3.1, 1.3.2 or 1.3.3 may be used, are:

1.   Other coordinate reference systems may be specified for specific spatial data themes in this Annex.

2.   For regions outside of continental Europe, Member States may define suitable coordinate reference systems.

The geodetic codes and parameters needed to describe these coordinate reference systems and to allow conversion and transformation operations shall be documented and an identifier shall be created, according to EN ISO 19111 and ISO 19127.

1.4.   **Coordinate Reference Systems used in the View Network Service**

For the display of spatial data sets with the view network service as specified in Regulation No 976/2009, at least the coordinate reference systems for two-dimensional geodetic coordinates (latitude, longitude) shall be available.

1.5.   **Coordinate Reference System Identifiers**

1.   Coordinate reference system parameters and identifiers shall be managed in one or several common registers for coordinate reference systems.

2.   Only identifiers contained in a common register shall be used for referring to the coordinate reference systems listed in this Section.

2.   GEOGRAPHICAL GRID SYSTEMS

2.1.   **Definitions**

In addition to the definitions set out in Article 2, the following definitions shall apply:
—   'grid' means a network composed of two or more sets of curves in which the members of each set intersect the members of the other sets in an algorithmic way,
—   'grid cell' means a cell delineated by grid curves,
—   'grid point' means a point located at the intersection of two or more curves in a grid.

2.2.   **Grids**

[**F1**Either of the grids with fixed and unambiguously defined locations defined in Sections 2.2.1 and 2.2.2 shall be used as a geo-referencing framework to make gridded data available in INSPIRE, unless one of the following conditions holds:

(1)   Other grids may be specified for specific spatial data themes in Annexes II-IV. In this case, data exchanged using such a theme-specific grid shall use standards in which the grid definition is either included with the data, or linked by reference.

(2)   For grid referencing in regions outside of continental Europe Member States may define their own grid based on a geodetic coordinate reference system compliant with ITRS and a Lambert Azimuthal Equal Area projection, following the same principles as laid down for the grid specified in Section 2.2.1. In this case, an identifier for the coordinate reference system shall be created.]

2.2.1.   *[**F1**Equal Area Grid]*

[**F3**. . . . .]

Textual Amendments

F3   Deleted by Commission Regulation (EU) No 1253/2013 of 21 October 2013 amending Regulation (EU) No 1089/2010 implementing Directive 2007/2/EC as regards interoperability of spatial data sets and services.

The grid is based on the ETRS89 Lambert Azimuthal Equal Area (ETRS89-LAEA) coordinate reference system with the centre of the projection at the point 52° N, 10° E and false easting: $x_0 = 4\ 321\ 000$ m, false northing: $y_0 = 3\ 210\ 000$ m.

The origin of the grid coincides with the false origin of the ETRS89-LAEA coordinate reference system (x=0, y=0).

Grid points of grids based on ETRS89-LAEA shall coincide with grid points of the grid.

The grid is hierarchical, with resolutions of 1m, 10m, 100m, 1 000m, 10 000m and 100 000m.

The grid orientation is south-north, west-east.

The grid is designated as Grid_ETRS89-LAEA. For identification of an individual resolution level the cell size in metres is appended.

[**F3**. . . . .]

For the unambiguous referencing and identification of a grid cell, the cell code composed of the size of the cell and the coordinates of the lower left cell corner in ETRS89-LAEA shall be used. The cell size shall be denoted in metres ('m') for cell sizes up to 100m or kilometres ('km') for cell sizes of 1 000m and above. Values for northing and easting shall be divided by 10^n, where *n* is the number of trailing zeros in the cell size value.

[**F1**2.2.2.   *Zoned Geographic Grid*

1.   When gridded data is delivered using geodetic coordinates as specified in Section 1.3 of this Annex the multi-resolution grid defined in this Section may be used as a geo-referencing framework.

2.   The resolution levels are defined in Table 1.

3.   The grid shall be based on the ETRS89-GRS80 geodetic coordinate reference system.

4.   The origin of the grid shall coincide with the intersection point of the Equator with the Greenwich Meridian (GRS80 latitude φ=0; GRS80 longitude λ=0).

5.   The grid orientation shall be south-north and west-east according to the net defined by the meridians and parallels of the GRS80 ellipsoid.

6.   For grid referencing in regions outside of continental Europe data providers may define their own grid based on a geodetic coordinate reference system compliant with ITRS, following the same principles as laid down for the Pan-European Grid_ETRS89-GRS80zn. In this case, an identifier for the coordinate reference system and the corresponding identifier for the grid shall be created.

7.   This grid shall be subdivided in zones. The south-north resolution of the grid shall have equal angular spacing. The west-east resolution of the grid shall be established as the product of angular spacing multiplied by the factor of the zone as defined in Table 1.

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8.   The grid shall be designated Grid_ETRS89-GRS80z*n_res*, where *n* represents the number of the zone and *res* the cell size in angular units, as specified in Table 1.

TABLE 1

Common Grid_ETRS89-GRS80: Latitude spacing (resolution level) and longitude spacing for each zone

Resolution Levels	LATITUDE SPACING (Arc seconds)	LONGITUDE SPACING (Arc seconds)					Cell size
		Zone 1(Lat. 0°–50°)	Zone 2(Lat. 50°–70°)	Zone 3(Lat. 70°–75°)	Zone 4(Lat. 75°–80°)	Zone 5(Lat. 80°–90°)	
LEVEL 0	3 600	3 600	7 200	10 800	14 400	21 600	1 D
LEVEL 1	3 000	3 000	6 000	9 000	12 000	18 000	50 M
LEVEL 2	1 800	1 800	3 600	5 400	7 200	10 800	30 M
LEVEL 3	1 200	1 200	2 400	3 600	4 800	7 200	20 M
LEVEL 4	600	600	1 200	1 800	2 400	3 600	10 M
LEVEL 5	300	300	600	900	1 200	1 800	5 M
LEVEL 6	120	120	240	360	480	720	2 M
LEVEL 7	60	60	120	180	240	360	1 M
LEVEL 8	30	30	60	90	120	180	30 S
LEVEL 9	15	15	30	45	60	90	15 S
LEVEL 10	5	5	10	15	20	30	5 S
LEVEL 11	3	3	6	9	12	18	3 S
LEVEL 12	1,5	1,5	3	4,5	6	9	1 500 MS
LEVEL 13	1	1	2	3	4	6	1 000 MS
LEVEL 14	0,75	0,75	1,5	2,25	3	4,5	750 MS
LEVEL 15	0,5	0,5	1	1,5	2	3	500 MS
LEVEL 16	0,3	0,3	0,6	0,9	1,2	1,8	300 MS
LEVEL 17	0,15	0,15	0,3	0,45	0,6	0,9	150 MS
LEVEL 18	0,1	0,1	0,2	0,3	0,4	0,6	100 MS

LEVEL 19	0,075	0,075	0,15	0,225	0,3	0,45	75 MS
LEVEL 20	0,03	0,03	0,06	0,09	0,12	0,18	30 MS
LEVEL 21	0,015	0,015	0,03	0,045	0,06	0,09	15 MS
LEVEL 22	0,01	0,01	0,02	0,03	0,04	0,06	10 MS
LEVEL 23	0,0075	0,0075	0,015	0,0225	0,03	0,045	7 500 MMS
LEVEL 24	0,003	0,003	0,006	0,009	0,012	0,018	3 000 MMS
FACTOR	—	1	2	3	4	6	—]

3.   GEOGRAPHICAL NAMES

3.1.   **Spatial Object Types**

The following spatial object types shall be used for the exchange and classification of spatial objects from data sets that relate to the spatial data theme Geographical Names:

—   Named Place

3.1.1. *Named Place (NamedPlace)*

Any real world entity referred to by one or several proper nouns.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NAMEDPLACE

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	Geometry associated to the named place. This data specification does not restrict the geometry types.	GM_Object	

inspireId	External object identifier of the spatial object.	Identifier	
leastDetailedViewingResolution	Resolution, expressed as the inverse of an indicative scale or a ground distance, above which the named place and its associated name(s) should no longer be displayed in a basic viewing service.	MD_Resolution	voidable
localType	Characterisation of the kind of entity designated by geographical name(s), as defined by the data provider, given in at least in one official language of the European Union.	LocalisedCharacterString	voidable
mostDetailedViewingResolution	Resolution, expressed as the inverse of an indicative scale or a ground distance, below which the named place and its associated name(s) should no longer be displayed in a basic viewing service.	MD_Resolution	voidable
name	Name of the named place.	GeographicalName	
relatedSpatialObject	Identifier of a spatial object representing the same entity but appearing in other themes of INSPIRE, if any.	Identifier	voidable
type	Characterisation of the kind of entity designated by geographical name(s).	NamedPlaceTypeValue	voidable

3.2. **Data Types**

3.2.1. *Geographical Name (GeographicalName)*

Proper noun applied to a real world entity.

ATTRIBUTES OF THE DATA TYPE GEOGRAPHICALNAME

Attribute	Definition	Type	Voidability
grammaticalGender	Classes of nouns reflected in the behaviour of associated words.	GrammaticalGenderValue	voidable
grammaticalNumber	Grammatical category of nouns that expresses count distinctions.	GrammaticalNumberValue	voidable
language	Language of the name, given as a three letters code, in accordance with either ISO 639-3 or ISO 639-5.	CharacterString	voidable
nameStatus	Qualitative information enabling to discern which credit should be given to the name with respect to its standardisation and/ or its topicality.	NameStatusValue	voidable
nativeness	Information enabling to acknowledge if the name is the one that is/was used in the area where the spatial object is situated at the instant when the name is/was in use.	NativenessValue	voidable
pronunciation	Proper, correct or standard (standard within the linguistic community concerned) pronunciation of the geographical name.	PronunciationOfName	voidable
sourceOfName	Original data source from which the geographical name is taken from and integrated in the	CharacterString	voidable

	data set providing/ publishing it. For some named spatial objects it might refer again to the publishing data set if no other information is available.		
spelling	A proper way of writing the geographical name.	SpellingOfName	

3.2.2. *Pronunciation Of Name (PronunciationOfName)*

Proper, correct or standard (standard within the linguistic community concerned) pronunciation of a name.

Attributes of the data type PronunciationOfName

Attribute	Definition	Type	Voidability
pronunciationIPA	Proper, correct or standard (standard within the linguistic community concerned) pronunciation of a name, expressed in International Phonetic Alphabet (IPA).	CharacterString	voidable
pronunciationSoundLink	Proper, correct or standard (standard within the linguistic community concerned) pronunciation of a name, expressed by a link to any sound file.	URI	voidable

Constraints of the data type PronunciationOfName

At least one of the two attributes pronunciationSoundLink and pronunciationIPA shall not be void.

3.2.3. *Spelling Of Name (SpellingOfName)*

Proper way of writing a name.

ATTRIBUTES OF THE DATA TYPE SPELLINGOFNAME

Attribute	Definition	Type	Voidability

script	Set of graphic symbols (for example an alphabet) employed in writing the name, expressed using the four letters codes defined in ISO 15924, where applicable.	CharacterString	voidable
text	Way the name is written.	CharacterString	
transliterationScheme	Method used for the names conversion between different scripts.	CharacterString	voidable

3.3.   Code Lists

3.3.1.   *Grammatical Gender (GrammaticalGenderValue)*

The grammatical gender of a geographical name.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] GRAMMATICALGENDERVALUE

Value	Definition
common	'Common' grammatical gender (the merging of 'masculine' and 'feminine').
feminine	Feminine grammatical gender.
masculine	Masculine grammatical gender.
neuter	Neuter grammatical gender.]

3.3.2.   *Grammatical Number (GrammaticalNumberValue)*

The grammatical number of a geographical name.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] GRAMMATICALNUMBERVALUE

Value	Definition

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dual	Dual grammatical number.
plural	Plural grammatical number.
singular	Singular grammatical number.**]**

3.3.3.   *Name Status (NameStatusValue)*

The status of a geographical name, that is the information enabling to discern which credit should be given to the name with respect to its standardisation and/or its topicality.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** NAMESTATUSVALUE

Value	Definition
historical	Historical name not in current use.
official	Name in current use and officially approved or established by legislation.
other	Current, but not official, nor approved name.
standardised	Name in current use and accepted or recommended by a body assigned advisory function and/or power of decision in matters of toponymy.**]**

3.3.4.   *Named Place Type (NamedPlaceTypeValue)*

The type of a named place.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** NAMEDPLACETYPEVALUE

Value	Definition
administrativeUnit	Units of administration, dividing areas where Member States have and/or exercise jurisdictional rights, for local, regional and national governance, separated by administrative boundaries.
building	Geographical location of buildings.
hydrography	Hydrographic elements, including marine areas and all other water bodies and items related to them, including river basins and sub-basins.
landcover	Physical and biological cover of the earth's surface including artificial surfaces, agricultural areas, forests, (semi-)natural areas, wetlands.

landform	Geomorphologic terrain feature.
other	A spatial object not included in the other types of the code list.
populatedPlace	A place inhabited by people.
protectedSite	Area designated or managed within a framework of international, Community and Member States' legislation to achieve specific conservation objectives.
transportNetwork	Road, rail, air, water and cable transport networks and related infrastructure. Includes links between different networks.**]**

3.3.5.   *Nativeness (NativenessValue)*

The nativeness of a geographical name.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** NATIVENESSVALUE

Value	**Definition**
endonym	Name for a geographical feature in an official or well-established language occurring in that area where the feature is situated.
exonym	Name used in a specific language for a geographical feature situated outside the area where that language is widely spoken, and differing in form from the respective endonym(s) in the area where the geographical feature is situated.**]**

3.4.   **Layers**

LAYER FOR THE SPATIAL DATA THEME GEOGRAPHICAL NAMES

Layer Name	**Layer Title**	**Spatial object type**
GN.GeographicalNames	Geographical Names	NamedPlace

[**F1**4.   ADMINISTRATIVE UNITS

4.1.   **Structure of the Spatial Data Theme Administrative Units**

The types specified for the spatial data theme Administrative Units are structured in the following packages:
—   Administrative Units
—   Maritime Units

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4.2.   **Administrative Units**

4.2.1.   *Spatial object types*

The package Administrative Units contains the following spatial object types:
—   Administrative Boundary
—   Administrative Unit
—   Condominium

4.2.1.1. Administrative Boundary (AdministrativeBoundary)

A line of demarcation between administrative units.
Attributes of the spatial object type AdministrativeBoundary

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
country	Two-character country code according to the Interinstitutional style guide published by the Publications Office of the European Union.	CountryCode	
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	Geometric representation of border line.	GM_Curve	
inspireId	External object identifier of the spatial object.	Identifier	
legalStatus	Legal status of this administrative boundary.	LegalStatusValue	voidable
nationalLevel	The hierarchy levels of all adjacent administrative units this boundary is part of.	AdministrativeHierarchyLevel	

| technicalStatus | The technical status of the administrative boundary. | TechnicalStatusValue | voidable |

Association roles of the spatial object type AdministrativeBoundary

Association role	Definition	Type	Voidability
admUnit	The administrative units separated by this administrative boundary.	AdministrativeUnit	voidable

4.2.1.2.   Administrative Unit (AdministrativeUnit)

Unit of administration where a Member State has and/or exercises jurisdictional rights, for local, regional and national governance.

Attributes of the spatial object type AdministrativeUnit

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
country	Two-character country code according to the Interinstitutional style guide published by the Publications Office of the European Union.	CountryCode	
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	Geometric representation of spatial area covered by this administrative unit.	GM_MultiSurface	
inspireId	External object identifier of the spatial object.	Identifier	
name	Official national geographical name of the administrative	GeographicalName	

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	unit, given in several languages where required.		
nationalCode	Thematic identifier corresponding to the national administrative codes defined in each country.	CharacterString	
nationalLevel	Level in the national administrative hierarchy, at which the administrative unit is established.	AdministrativeHierarchyLevel	
nationalLevelName	Name of the level in the national administrative hierarchy, at which the administrative unit is established.	LocalisedCharacterString	voidable
residenceOfAuthority	Center for national or local administration.	ResidenceOfAuthority	voidable

Association roles of the spatial object type AdministrativeUnit

Association role	Definition	Type	Voidability
administeredBy	Administrative unit established at same level of national administrative hierarchy that administers this administrative unit.	AdministrativeUnit	voidable
boundary	The administrative boundaries between this administrative unit and all the units adjacent to it.	AdministrativeBoundary	voidable
coAdminister	Administrative unit established at same level of national administrative hierarchy which is co-administered by this administrative unit.	AdministrativeUnit	voidable

condominium	Condominium administered by this administrative unit.	Condominium	voidable
lowerLevelUnit	Units established at a lower level of the national administrative hierarchy which are administered by the administrative unit.	AdministrativeUnit	voidable
upperLevelUnit	Unit established at a higher level of national administrative hierarchy that this administrative unit administers	AdministrativeUnit	voidable

Constraints of the spatial object type AdministrativeUnit

Association role condominium applies only for administrative units which nationalLevel='1st order' (country level).

No unit at lowest level can associate units at lower level.

No unit at highest level can associate units at a higher level.

4.2.1.3. Condominium (Condominium)

An administrative area established independently to any national administrative division of territory and administered by two or more countries.

Attributes of the spatial object type Condominium

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	Geometric representation of spatial area covered by this condominium	GM_MultiSurface	
inspireId	External object identifier of the spatial object.	Identifier	

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| name | Official geographical name of this condominium, given in several languages where required. | GeographicalName | voidable |

Association roles of the spatial object type Condominium

Association role	Definition	Type	Voidability
admUnit	The administrative unit administering the condominium	AdministrativeUnit	voidable

4.2.2.   *Data Types*

4.2.2.1.   Residence Of Authority (ResidenceOfAuthority)

Data type representing the name and position of a residence of authority.
Attributes of the data type ResidenceOfAuthority

Attribute	Definition	Type	Voidability
geometry	Position of the residence of authority.	GM_Point	voidable
name	Name of the residence of authority.	GeographicalName	

4.2.3.   *Enumerations*

4.2.3.1.   Legal Status (LegalStatusValue)

Description of the legal status of administrative boundaries.
Allowed values for the enumeration LegalStatusValue

Value	Definition
agreed	The edge-matched boundary has been agreed between neighbouring administrative units and is stable now.
notAgreed	The edge-matched boundary has not yet been agreed between neighbouring administrative units and could be changed.

4.2.3.2.   Technical Status (TechnicalStatusValue)

Description of the technical status of administrative boundaries.
Allowed values for the enumeration TechnicalStatusValue

Value	Definition

edgeMatched	The boundaries of neighbouring administrative units have the same set of coordinates.
notEdgeMatched	The boundaries of neighbouring administrative units do not have the same set of coordinates.

4.2.4. *Code Lists*

4.2.4.1. Administrative Hierarchy Level (AdministrativeHierarchyLevel)

Levels of administration in the national administrative hierarchy. This code list reflects the level in the hierarchical pyramid of the administrative structures, which is based on geometric aggregation of territories and does not necessarily describe the subordination between the related administrative authorities.

This code list shall be managed in a common code list register.

4.3. **Maritime Units**

4.3.1. *Spatial object types*

The package Maritime Units contains the following spatial object types:
—   Baseline
—   Maritime Boundary
—   Maritime Zone

4.3.1.1. Baseline (Baseline)

The line from which the outer limits of the territorial sea and certain other outer limits are measured.

Attributes of the spatial object type Baseline

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable

Association roles of the spatial object type Baseline

Association role	Definition	Type	Voidability

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segment	Segment of a baseline.	BaselineSegment	

4.3.1.2. Maritime Boundary (MaritimeBoundary)

A line depicting the separation of any type of maritime jurisdiction.
Attributes of the spatial object type MaritimeBoundary

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	
geometry	Geometric representation of the maritime boundary.	GM_Curve	
country	The country that the maritime zone of this boundary belongs to.	CountryCode	
legalStatus	Legal status of this maritime boundary.	LegalStatusValue	voidable
technicalStatus	The technical status of the maritime boundary.	TechnicalStatusValue	voidable
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable

4.3.1.3. Maritime Zone (MaritimeZone)

A belt of sea defined by international treaties and conventions, where coastal State executes jurisdictional rights.
Attributes of the spatial object type MaritimeZone

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	
geometry	Geometric representation of spatial area covered	GM_MultiSurface	

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	by this maritime zone.		
zoneType	Type of maritime zone.	MaritimeZoneTypeValue	
country	The country that this maritime zone belongs to.	CountryCode	
name	Name(s) of the maritime zone.	GeographicalName	voidable
beginLifeSpanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifepanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable

Association roles of the spatial object type MaritimeZone

Association role	Definition	Type	Voidability
baseline	Baseline or baselines used for the delineation of this maritime zone.	Baseline	voidable
boundary	The boundary or boundaries of this maritime zone.	MaritimeBoundary	voidable

4.3.2.   *Data types*

4.3.2.1.   Baseline Segment (BaselineSegment)

Segment of the baseline from which the outer limits of the territorial sea and certain other outer limits are measured.

Attributes of the data type BaselineSegment

Attribute	Definition	Type	Voidability
geometry	Geometric representation of the baseline segment.	GM_Curve	
segmentType	The baseline type used for this segment.	BaselineSegmentTypeValue	

4.3.3.   *Code lists*

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4.3.3.1. Baseline Segment Type (BaselineSegmentTypeValue)

The types of baselines used to measure the breadth of the territorial sea.

The allowed values for this code list comprise only the values specified in the table below.
Values for the code list BaselineSegmentTypeValue

Value	Name	Definition
normal	normal	The normal baseline for measuring the breadth of the territorial sea is the low-water line along the coast as marked on large-scale charts officially recognized by the coastal State.
straight	straight	The baseline for measuring the breadth of the territorial sea is the straight baseline established by joining the appropriate points.
archipelagic	archipelagic	The baseline for measuring the breadth of the territorial sea is the straight baseline joining the outermost points of the outermost islands and drying reefs of the archipelago.

4.3.3.2. Maritime Zone Type (MaritimeZoneTypeValue)

Type of martime zone.

The allowed values for this code list comprise only the values specified in the table below.
Values for the code list MaritimeZoneTypeValue

Value	Name	Definition
internalWaters	Internal Waters	The waters on the landward side of the baselines of the territorial sea of the coastal State.
territorialSea	Territorial Sea	A belt of sea of a defined breadth not exceeding 12 nautical miles measured from the baselines determined in accordance to the United Nations Convention of Law on the Sea.
contiguousZone	Contiguous Zone	A zone contiguous to a territorial sea of a coastal State, which may not extend

		beyond 24 nautical miles from the baselines from which the breadth of the territorial sea is measured.
exclusiveEconomicZone	Exclusive Economic Zone	An area beyond and adjacent to the territorial sea of a coastal State, subject to the specific legal regime under which the rights and jurisdiction of the coastal State and the rights and freedoms of other States are governed by the relevant provisions of the United Nations Convention on Law of the Sea.
continentalShelf	Continental Shelf	A maritime zone beyond and adjacent to the a territorial sea of a coastal State whose outer boundary is determined in accordance with Article 76 of the United Nations Convention on the Law of the Sea.

4.4.   **Theme-specific Requirements**

1.   Each instance of spatial object type AdministrativeUnit, except for the country level unit representing a Member State and co-administered units, shall refer exactly to one unit at a higher level of administrative hierarchy. This correspondence shall be expressed by the upperLevelUnit association role of AdministrativeUnit spatial object type.

2.   Each instance of spatial object type AdministrativeUnit, except for those at the lowest level, shall refer to their respective lower level units. This correspondence shall be expressed by the lowerLevelUnit association role of AdministrativeUnit spatial object type.

3.   If an administrative unit is co-administered by two or more other administrative units the association role administeredBy shall be used. The units co-administering this unit shall apply inverse role coAdminister.

4.   Administrative units at the same level of administrative hierarchy shall not conceptually share common areas.

5.   Instances of the spatial object type AdministrativeBoundary shall correspond to the edges in the topological structure of the complete (including all levels) boundary graph.

6.   The spatial extent of a condominium may not be part of the geometry representing the spatial extent of an administrative unit.

7.   Condominiums can only be administered by administrative units at country level.

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4.5. Layers
Layers for the spatial data theme Administrative Units

Layer Name	Layer Title	Spatial object type
AU.AdministrativeUnit	Administrative unit	AdministrativeUnit
AU.AdministrativeBoundary	Administrative boundary	AdministrativeBoundary
AU.Condominium	Condominium	Condominium
AU.Baseline	Baseline	Baseline
AU.<CodeListValue>ᵃ Example: AU.ContiguousZone	<human readable name> Example: Contiguous Zone	MaritimeZone (zoneType: MaritimeZoneTypeValue)
AU.MaritimeBoundary	Maritime boundary	MaritimeBoundary

a One layer shall be made available for each code list value, in accordance with Art. 14(3).]

5. ADDRESSES

5.1. Definitions

In addition to the definitions set out in Article 2, the following definition shall apply:
— 'addressable object' means a spatial object to which it is meaningful to associate addresses.

5.2. Spatial Object Types

The following spatial object types shall be used for the exchange and classification of spatial objects from data sets that relate to the spatial data theme Addresses:
— Address
— Address Area Name
— Address Component
— Administrative Unit Name
— Postal Descriptor
— Thoroughfare Name

5.2.1. *Address (Address)*

An identification of the fixed location of property by means of a structured composition of geographic names and identifiers.
Attributes of the spatial object type Address

Attribute	Definition	Type	Voidability
alternativeIdentifier	External, thematic identifier of the address spatial object, which enables interoperability with existing legacy systems or applications.	CharacterString	voidable

beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
inspireId	External object identifier of the spatial object.	Identifier	
locator	Human readable designator or name.	AddressLocator	
position	Position of a characteristic point which represents the location of the address according to a certain specification, including information on the origin of the position.	GeographicPosition	
status	Validity of the address within the life-cycle (version) of the address spatial object.	StatusValue	voidable
validFrom	Date and time of which this version of the address was or will be valid in the real world.	DateTime	voidable
validTo	Date and time at which this version of the address ceased or will cease to exist in the real world.	DateTime	voidable

Association roles of the spatial object type Address

Association role	Definition	Type	Voidability
building	Building that the address is assigned to or associated with.	Type to be specified in the spatial data theme Buildings	voidable

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component	Represents that the address component is engaged as a part of the address.	AddressComponent	
parcel	Cadastral parcel that this address is assigned to or associated with.	CadastralParcel	voidable
parentAddress	Main (parent) address with which this (sub) address is tightly connected	Address	voidable

Constraints of the spatial object type Address

An address shall have an administrative unit address component spatial object whose level is 1 (Country).

An address shall have exactly one default geographic position (the 'default' attribute of the GeographicPosition spatial object must be 'true').

5.2.2.   *Address Area Name (AddressAreaName)*

An address component which represents the name of a geographic area or locality that groups a number of addressable objects for addressing purposes, without being an administrative unit.

This type is a sub-type of AddressComponent.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE ADDRESSAREANAME

Attribute	Definition	Type	Voidability
name	Proper noun applied to the address area.	GeographicalName	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE ADDRESSAREANAME

Association role	Definition	Type	Voidability
namedPlace	The named place that this address area name represents.	NamedPlace	voidable

5.2.3.   *Address Component (AddressComponent)*

Identifier or geographic name of a specific geographic area, location, or other spatial object which defines the scope of an address.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE ADDRESSCOMPONENT

Attribute	Definition	Type	Voidability

alternativeIdentifier	External, thematic identifier of the address component spatial object, which enables interoperability with existing legacy systems or applications.	CharacterString	voidable
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
inspireId	External object identifier of the spatial object.	Identifier	
status	Validity of the address component within the life-cycle (version) of the address component spatial object.	StatusValue	voidable
validFrom	Date and time of which this version of the address component was or will be valid in the real world.	DateTime	voidable
validTo	Date and time at which the address component ceased/ will cease to exist in the real world.	DateTime	voidable

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE ADDRESSCOMPONENT

Association role	Definition	Type	Voidability
situatedWithin	Another address component within which the spatial object represented by this address	AddressComponent	voidable

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component is situated.			

5.2.4. *Administrative Unit Name (AdminUnitName)*

An address component which represents the name of a unit of administration where a Member State has and/or exercises jurisdictional rights, for local, regional and national governance.

This type is a sub-type of AddressComponent.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE ADMINUNITNAME

Attribute	Definition	Type	Voidability
level	The level of administration in the national administrative hierarchy.	AdministrativeHierarchyLevel	
name	Official, geographical name of the administrative unit, given in different languages where required.	GeographicalName	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE ADMINUNITNAME

Association role	Definition	Type	Voidability
adminUnit	The administrative unit that is the source of the content of the administrative unit name.	AdministrativeUnit	voidable

5.2.5. *Postal Descriptor (PostalDescriptor)*

An address component which represents the identification of a subdivision of addresses and postal delivery points in a country, region or city for postal purposes.

This type is a sub-type of AddressComponent.
Attributes of the spatial object type PostalDescriptor

Attribute	Definition	Type	Voidability
postCode	A code created and maintained for postal purposes to identify a subdivision of addresses and postal delivery points.	CharacterString	

| postName | One or more names created and maintained for postal purposes to identify a subdivision of addresses and postal delivery points. | GeographicalName | |

Constraints of the spatial object type PostalDescriptor

If no post code exists, a post name is required.

If no post name exists, a post code is required.

5.2.6.   *Thoroughfare Name (ThoroughfareName)*

An address component which represents the name of a passage or way through from one location to another.

This type is a sub-type of AddressComponent.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE THOROUGHFARENAME

Attribute	Definition	Type	Voidability
name	Name of the thoroughfare.	ThoroughfareNameValue	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE THOROUGHFARENAME

Association role	Definition	Type	Voidability
transportLink	One or several transport network links to which the spatial object of the thoroughfare name has been designated.	TransportLink	voidable

5.3.   **Data Types**

5.3.1.   *Address Locator (AddressLocator)*

Human readable designator or name that allows a user or application to reference and distinguish the address from neighbour addresses, within the scope of a thoroughfare name, address area name, administrative unit name or postal descriptor, in which the address is situated.

Attributes of the data type AddressLocator

Attribute	Definition	Type	Voidability
designator	A number or a sequence of characters that uniquely identifies	LocatorDesignator	

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	the locator within the relevant scope(s).		
level	The level to which the locator refers.	LocatorLevelValue	
name	A geographic name or descriptive text associated to a property identified by the locator.	LocatorName	

Association roles of the data type AddressLocator

Association role	Definition	Type	Voidability
withinScopeOf	The address component that defines the scope within which the address locator is assigned according to rules ensuring unambiguousness.	AddressComponent	voidable

Constraints of the data type AddressLocator

If no designator exists, a name is required.

If no name exists, a designator is required.

5.3.2.   *Address Representation (AddressRepresentation)*

Representation of an address spatial object for use in external application schemas that need to include the basic, address information in a readable way.

ATTRIBUTES OF THE DATA TYPE ADDRESSREPRESENTATION

Attribute	Definition	Type	Voidability
addressArea	The name or names of a geographic area or locality that groups a number of addressable objects for addressing purposes, without being an administrative unit.	GeographicalName	voidable
adminUnit	The name or names of a unit of administration where a Member State has and/or exercises jurisdictional rights,	GeographicalName	

	for local, regional and national governance.		
locatorDesignator	A number or a sequence of characters which allows a user or an application to interpret, parse and format the locator within the relevant scope. A locator may include more locator designators.	CharacterString	
locatorName	Proper noun(s) applied to the real world entity identified by the locator.	GeographicalName	
postCode	A code created and maintained for postal purposes to identify a subdivision of addresses and postal delivery points.	CharacterString	voidable
postName	One or more names created and maintained for postal purposes to identify a subdivision of addresses and postal delivery points.	GeographicalName	voidable
thoroughfare	The name or names of a passage or way through from one location to another like a road or a waterway.	GeographicalName	voidable

ASSOCIATION ROLES OF THE DATA TYPE ADDRESSREPRESENTATION

Association role	Definition	Type	Voidability
addressFeature	Reference to the address spatial object.	Address	voidable

5.3.3. *Geographic Position (GeographicPosition)*

The position of a characteristic point which represents the location of the address according to a certain specification, including information on the origin of the position.

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ATTRIBUTES OF THE DATA TYPE GEOGRAPHICPOSITION

Attribute	Definition	Type	Voidability
default	Specifies whether or not this position should be considered as the default.	Boolean	
geometry	The position of the point expressed in coordinates in the chosen spatial reference system.	GM_Point	
method	Description of how and by whom the geographic position of the address was created or derived.	GeometryMethodValue	voidable
specification	Information defining the specification used to create or derive this geographic position of the address.	GeometrySpecificationValue	voidable

5.3.4.   *Locator Designator (LocatorDesignator)*

A number or a sequence of characters that uniquely identifies the locator within the relevant
scope(s). The full identification of the locator could include one or more locator designators.

ATTRIBUTES OF THE DATA TYPE LOCATORDESIGNATOR

Attribute	Definition	Type	Voidability
designator	The identifying part of the locator designator composed by one or more digits or other characters.	CharacterString	
type	The type of locator value, which enables an application to interpret, parse or format it according to certain rules.	LocatorDesignatorTypeValue	

5.3.5.   *Locator Name (LocatorName)*

Proper noun applied to the real world entity identified by the locator.

ATTRIBUTES OF THE DATA TYPE LOCATORNAME

Attribute	Definition	Type	Voidability
name	The identifying part of the locator name.	GeographicalName	
type	The type of locator value, which enables an application to interpret, parse or format it according to certain rules.	LocatorNameTypeValue	

5.3.6.	*Part Of Name (PartOfName)*

A part of the full name resulting from the subdivision of the thoroughfare name into separate, semantic parts, using the same language and script as the full thoroughfare name.

ATTRIBUTES OF THE DATA TYPE PARTOFNAME

Attribute	Definition	Type	Voidability
part	The character string that expresses the separate part of the name using the same language and script as the full thoroughfare name.	CharacterString	
type	A classification of the part of name according to its semantics (meaning) in the complete thoroughfare name.	PartTypeValue	

5.3.7.	*Thoroughfare Name Value (ThoroughfareNameValue)*

Proper noun applied to thoroughfare optionally including a subdivision of the name into parts.

ATTRIBUTES OF THE DATA TYPE THOROUGHFARENAMEVALUE

Attribute	Definition	Type	Voidability
name	Proper noun applied to the thoroughfare.	GeographicalName	
nameParts	One or several parts into which the thoroughfare name can be subdivided.	PartOfName	voidable

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5.4.   **Code Lists**

5.4.1.   *Geometry Method (GeometryMethodValue)*

Description of how and by whom this geographic position of the address was created or derived.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** GEOMETRYMETHODVALUE

Value	Definition
byAdministrator	Decided and recorded manually by the official body responsible for address allocation or by the dataset custodian.
byOtherParty	Decided and recorded manually by another party.
fromFeature	Derived automatically from another INSPIRE spatial object which is related to the address or address component.**]**

5.4.2.   *Geometry Specification (GeometrySpecificationValue)*

Information defining the specification used to create or derive this geographic position of the address.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** GEOMETRYSPECIFICATIONVALUE

Value	Definition
addressArea	Position derived from the related address area.
adminUnit1stOrder	Position derived from the related administrative unit of 1st order.
adminUnit2ndOrder	Position derived from the related administrative unit of 2nd order.
adminUnit3rdOrder	Position derived from the related administrative unit of 3rd order.
adminUnit4thOrder	Position derived from the related administrative unit of 4th order.
adminUnit5thOrder	Position derived from the related administrative unit of 5th order.
adminUnit6thOrder	Position derived from the related administrative unit of 6th order.
building	Position aims at identifying the related building.

entrance	Position aims at identifying the entrance door or gate.
parcel	Position aims at identifying the related land parcel.
postalDelivery	Position aims at identifying a postal delivery point.
postalDescriptor	Position derived from the related postcode area.
segment	Position derived from the related segment of a thoroughfare.
thoroughfareAccess	Position aims at identifying the access point from the thoroughfare.
utilityService	Position aims at identifying a point of utility service.**]**

5.4.3.   *Locator Designator Type (LocatorDesignatorTypeValue)*

Description of the semantics of the locator designator.

[[F1]The allowed values for this code list comprise only the values in the table below.**]**

[[F4]**[**[F1]VALUES FOR THE CODE LIST**]** LOCATORDESIGNATORTYPEVALUE

Value	**Definition**
addressIdentifierGeneral	Address identifier composed by numbers and/or characters.
addressNumber	Address identifier composed only by numbers.
addressNumber2ndExtension	Second extension to the address number.
addressNumberExtension	Extension to the address number.
buildingIdentifier	Building identifier composed by numbers and/or characters.
buildingIdentifierPrefix	Prefix to the building number.
cornerAddress1stIdentifier	Address identifier related to the primary thoroughfare name in a corner address.
cornerAddress2ndIdentifier	Address identifier related to the secondary thoroughfare name in a corner address.
entranceDoorIdentifier	Identifier for an entrance door, entrance gate, or covered entranceway.
floorIdentifier	Identifier of a floor or level inside a building.
kilometrePoint	A mark on a road whose number identifies the existing distance between the origin point

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	of the road and that mark, measured along the road.
postalDeliveryIdentifier	Identifier of a postal delivery point.
staircaseIdentifier	Identifier for a staircase, normally inside a building.
unitIdentifier	Identifier of a door, dwelling, suite or room inside a building.**]**

5.4.4.   *Locator Level (LocatorLevelValue)*

The level to which the locator refers.

[^{F1} — The allowed values for this code list comprise only the values in the table below.**]**

[**F1**The allowed values for this code list comprise only the values in the table below.]

[F4[F1VALUES FOR THE CODE LIST]** LOCATORLEVELVALUE

Value	Definition
accessLevel	The locator identifies a specific access to a plot of land, building or similar by use of an entrance number or similar identifier.
postalDeliveryPoint	The locator identifies a postal delivery point.
siteLevel	The locator identifies a specific plot of land, building or similar property by use of an address number, building number, building or property name.
unitLevel	The locator identifies a specific part of a building.**]**

5.4.5.   *Locator Name Type (LocatorNameTypeValue)*

Description of the semantics of the locator name.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[F4[F1VALUES FOR THE CODE LIST]** LOCATORNAMETYPEVALUE

Value	Definition
buildingName	Name of building or part of building.
descriptiveLocator	Narrative, textual description of the location or addressable object.
roomName	Identifier of a dwelling, suite or room inside a building.
siteName	Name of real estate, building complex or site.**]**

5.4.6.   *Part Type (PartTypeValue)*

A classification of the part of name according to its semantics in the complete thoroughfare name.

[F1The allowed values for this code list comprise only the values in the table below.]

[F4[F1VALUES FOR THE CODE LIST] PARTTYPEVALUE

Value	Definition
name	The part of name constitutes the core or root of the thoroughfare name.
namePrefix	The part of name is used to separate connecting words without sorting significance from the core of the thoroughfare name.
qualifier	The part of name qualifies the thoroughfare name.
type	The part of name indicates the category or type of thoroughfare.]

5.4.7.   *Status (StatusValue)*

Current validity of the real world address or address component.

[F1The allowed values for this code list comprise only the values in the table below.]

[F4[F1VALUES FOR THE CODE LIST] STATUSVALUE

Value	Definition
alternative	An address or address component in common use but different from the master address or address component as determined by the official body responsible for address allocation or by the dataset custodian.
current	Current and valid address or address component according to official body responsible for address allocation or deemed, by the dataset custodian, to be the most appropriate, commonly used address.
proposed	An address or address component awaiting approval by the dataset custodian or official body responsible for address allocation.
reserved	An address or address component approved by the official body responsible for address allocation or by the dataset custodian, but yet to be implemented.

retired	An address or address component no longer in every day use or abolished by the official body responsible for address allocation or by the dataset custodian.**]**

5.5. **Theme-specific Requirements**

5.5.1. *The Address Position*

1. In the data set, the position of the address shall be represented by the coordinates of the actual location with the best available accuracy. This will be the most precise directly captured coordinates or, if none exist, then coordinates derived from one of the address components, with priority given to the component that allows the position to be most accurately determined.

2. If an address has more than one position, the specification attribute shall be populated with a different value for each of these.

5.5.2. *Association roles*

1. The withinScopeOf association role shall be populated for all locators which are assigned according to rules that seek to ensure unambiguousness within a specific address component (that is thoroughfare name, address area name, postal descriptor or administrative unit name).

2. The association role parentAddress shall be populated for all addresses which are connected to a parent (or main) address.

3. An address shall have an association to the name of the country in which it is located. Furthermore, an address must have associations to the additional address components necessary to the unambiguous identification and location of the address instance.

5.6. **Layers**

LAYER FOR THE SPATIAL DATA THEME ADDRESSES

Layer Name	**Layer Title**	**Spatial object type**
AD.Address	Addresses	Address

6. CADASTRAL PARCELS

6.1. **Spatial Object Types**

The following spatial object types shall be used for the exchange and classification of spatial objects from data sets that relate to the spatial data theme Cadastral Parcels:
— Basic Property Unit
— Cadastral Boundary
— Cadastral Parcel
— Cadastral Zoning

Cadastral Parcels shall always be made available.

Basic property units shall be made available by Member States where unique cadastral references are given only for basic property units and not for parcels.

Cadastral boundaries shall be made available by Member States where absolute positional accuracy information is recorded for the cadastral boundary.

6.1.1.   *Basic Property Unit (BasicPropertyUnit)*

The basic unit of ownership that is recorded in the land books, land registers or equivalent. It is defined by unique ownership and homogeneous real property rights, and may consist of one or more adjacent or geographically separate parcels.

Attributes of the spatial object type BasicPropertyUnit

Attribute	Definition	Type	Voidability
areaValue	Registered area value giving quantification of the area projected on the horizontal plane of the cadastral parcels composing the basic property unit.	Area	voidable
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
inspireId	External object identifier of the spatial object.	Identifier	
nationalCadastralReference	Thematic identifier at national level, generally the full national code of the basic property unit. Must ensure the link to the national cadastral register or equivalent.	CharacterString	
validFrom	Official date and time the basic property unit was/will be legally established.	DateTime	voidable
validTo	Date and time at which the basic property unit legally ceased/will cease to be used.	DateTime	voidable

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Association roles of the spatial object type BasicPropertyUnit

Association role	Definition	Type	Voidability
administrativeUnit	The administrative unit of lowest administrative level containing this basic property unit.	AdministrativeUnit	voidable

Constraints of the spatial object type BasicPropertyUnit

Value of areaValue shall be given in square meters

6.1.2.   *Cadastral Boundary (CadastralBoundary)*

Part of the outline of a cadastral parcel. One cadastral boundary may be shared by two neighbouring cadastral parcels.

Attributes of the spatial object type CadastralBoundary

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
estimatedAccuracy	Estimated absolute positional accuracy of the cadastral boundary in the used INSPIRE coordinate reference system. Absolute positional accuracy is the mean value of the positional uncertainties for a set of positions, where the positional uncertainties are the distance between a measured position and what is considered as the corresponding true position.	Length	voidable

geometry	Geometry of the cadastral boundary.	GM_Curve	
inspireId	External object identifier of the spatial object.	Identifier	
validFrom	Official date and time the cadastral boundary was/will be legally established.	DateTime	voidable
validTo	Date and time at which the cadastral boundary legally ceased/will cease to be used.	DateTime	voidable

Association roles of the spatial object type CadastralBoundary

Association role	Definition	Type	Voidability
parcel	The cadastral parcel(s) outlined by this cadastral boundary. A cadastral boundary may outline one or two cadastral parcels.	CadastralParcel	voidable

Constraints of the spatial object type CadastralBoundary

Value of estimatedAccuracy shall be given in meters.

6.1.3.   *Cadastral Parcel (CadastralParcel)*

Areas defined by cadastral registers or equivalent.
Attributes of the spatial object type CadastralParcel

Attribute	Definition	Type	Voidability
areaValue	Registered area value giving quantification of the area projected on the horizontal plane of the cadastral parcel.	Area	voidable
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was	DateTime	voidable

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	superseded or retired in the spatial data set.		
geometry	Geometry of the cadastral parcel.	GM_Object	
inspireId	External object identifier of the spatial object.	Identifier	
label	Text commonly used to display the cadastral parcel identification.	CharacterString	
nationalCadastralReference	Thematic identifier at national level, generally the full national code of the cadastral parcel. Must ensure the link to the national cadastral register or equivalent.	CharacterString	
referencePoint	A point within the cadastral parcel.	GM_Point	voidable
validFrom	Official date and time the cadastral parcel was/will be legally established.	DateTime	voidable
validTo	Date and time at which the cadastral parcel legally ceased/ will cease to be used.	DateTime	voidable

Association roles of the spatial object type CadastralParcel

Association role	Definition	Type	Voidability
administrativeUnit	The administrative unit of lowest administrative level containing this cadastral parcel.	AdministrativeUnit	voidable
basicPropertyUnit	The basic property unit(s) containing this cadastral parcel.	BasicPropertyUnit	voidable
zoning	The cadastral zoning of lowest level containing this cadastral parcel.	CadastralZoning	voidable

Constraints of the spatial object type CadastralParcel

Value of areaValue shall be given in square meters.

Type of geometry shall be GM_Surface or GM_MultiSurface

6.1.4.   *Cadastral Zoning (CadastralZoning)*

Intermediary areas used in order to divide national territory into cadastral parcels.
Attributes of the spatial object type CadastralZoning

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
estimatedAccuracy	The estimated absolute positional accuracy of cadastral parcels within the cadastral zoning in the used INSPIRE coordinate reference system. Absolute positional accuracy is the mean value of the positional uncertainties for a set of positions, where the positional uncertainties are the distance between a measured position and what is considered as the corresponding true position.	Length	voidable
geometry	Geometry of the cadastral zoning.	GM_MultiSurface	
inspireId	External object identifier of spatial object.	Identifier	
label	Text commonly used to display the cadastral zoning identification.	CharacterString	

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level	Level of the cadastral zoning in the national cadastral hierarchy.	CadastralZoningLevelValue	voidable
levelName	Name of the level of the cadastral zoning in the national cadastral hierarchy, in at least one official language of the European Union.	LocalisedCharacterString	voidable
name	Name of the cadastral zoning.	GeographicalName	voidable
nationalCadastalZoningReference	Thematic identifier at national level, generally the full national code of the cadastral zoning.	CharacterString	
originalMapScaleDenominator	The denominator in the scale of the original paper map (if any) to whose extent the cadastral zoning corresponds.	Integer	voidable
referencePoint	A point within the cadastral zoning.	GM_Point	voidable
validFrom	Official date and time the cadastral zoning was/will be legally established.	DateTime	voidable
validTo	Date and time at which the cadastral zoning legally ceased/will cease to be used.	DateTime	voidable

Association roles of the spatial object type CadastralZoning

Association role	Definition	Type	Voidability
upperLevelUnit	The next upper level cadastral zoning containing this cadastral zoning.	CadastralZoning	voidable

Constraints of the spatial object type CadastralZoning

Value of estimatedAccuracy shall be given in meters.

A lower level cadastral zoning shall be part of an upper level zoning.

6.2. Code Lists

6.2.1. *Cadastral Zoning Level (CadastralZoningLevelValue)*

Levels of hierarchy of the cadastral zonings.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] CADASTRALZONINGLEVELVALUE

Value	Definition
1stOrder	Uppermost level (largest areas) in the hierarchy of cadastral zonings, equal or equivalent to municipalities.
2ndOrder	Second level in the hierarchy of cadastral zonings.
3rdOrder	Third level in the hierarchy of cadastral zonings.]

6.3 Theme-specific Requirements

6.3.1. *Geometry Representation*

1.   The value domain of spatial properties defined in this Section is not restricted to the Simple Feature spatial schema as defined by EN ISO 19125-1.

2.   If cadastral boundaries are provided, the cadastral boundaries corresponding to the outline of a cadastral parcel shall form closed ring(s).

6.3.2. *Modelling of object references*

All instances of the spatial object type CadastralParcel shall carry as a thematic identifier the attribute nationalCadastralReference. This attribute must enable users to make the link with rights, owners and other cadastral information in national cadastral registers or equivalent.

6.3.3. *Coordinate Reference Systems*

If data related to the spatial data theme Cadastral Parcels are made available in plane coordinates using the Lambert Conformal Conic projection, they shall also be made available in at least one other of the coordinate reference systems specified in sections 1.3.1, 1.3.2 and 1.3.3.

6.4. Portrayal Rules

6.4.1. *Layers*

LAYER FOR THE SPATIAL DATA THEME CADASTRAL PARCELS

Layer Name	Layer Title	Spatial object type
CP.CadastralParcel	Cadastral Parcel	CadastralParcel
CP.CadastralZoning	Cadastral Zoning	CadastralZoning
CP.CadastralBoundary	Cadastral Boundary	CadastralBoundary

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7.   TRANSPORT NETWORKS

7.1.   **Definitions**

In addition to the definitions set out in Article 2, the following definitions shall apply:

—   'aerodrome reference point' means the designated geographical location of an aerodrome, located near the initial or planned geometric centre of the aerodrome and normally remaining where originally established,

—   'airport/heliport' means a defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft/helicopters,

—   'deep water route' means a route in a designated area within defined limits which has been accurately surveyed for clearance of sea bottom and submerged obstacles to a minimum indicated depth of water,

—   'inter-modal connection' means a connection between two elements in different transport networks that use a different transport mode, giving the possibility to change transported media (people, goods, etc) from one transport mode to another,

—   'linear element' means a 1-dimensional object that serves as the axis along which linear referencing is performed,

—   'linear referencing' means a specification of a location relative to a one-dimensional object as a measurement along (and optionally offset from) that element,

—   'navaid equipment' means a physical navaid equipment placed on the Earth surface, like Very High Frequency Omnidirectional Radio Range (VOR), Distance Measuring Equipment (DME), localizer, Tactical Air Navigation Beacon (TACAN) etc., which help in guiding aircraft traffic safely through existing air routes,

—   'object referencing' means providing the spatial extent of an object by referring to an existing spatial object or collection of spatial objects,

—   'railway yard' means an area crossed by a number of parallel railway tracks (usually more than two) interconnected between them, which are used to stop trains in order to load / unload freight without interrupting the traffic of a main railway line,

—   'significant point' means a specified geographical location used to define an Air Traffic Service (ATS) route, the flight path of an aircraft or for other navigation/ATS purposes[**F5**,]

—   [**F4**'Area Navigation (RNAV)' means a method of navigation which permits aircraft operation on any desired flight path within the coverage of station-referenced navigation aids or within the limits of the capability of self-contained aids, or a combination of both,

—   'TACAN Navigation' means a method of navigation which permits aircraft operation on any desired flight path within the coverage of station-referenced Tactical Air Navigation Beacon (TACAN) navigation aids.]

7.2.   **Structure of the Spatial Data Theme Transport Networks**

The types specified for the spatial data theme transport networks are structured in the following packages:
—   Common Transport Elements
—   Air Transport Network
—   Cable Transport Network
—   Railway Transport Network
—   Road Transport Network
—   Water Transport Network

7.3.   Common Transport Elements

7.3.1.   *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Common Transport Elements:
—   Access Restriction
—   Condition Of Facility
—   Maintenance Authority
—   Marker Post
—   Owner Authority
—   Restriction for Vehicles
—   Traffic Flow Direction
—   Transport Area
—   Transport Link
—   Transport Link Sequence
—   Transport Link Set
—   Transport Network
—   Transport Node
—   Transport Object
—   Transport Point
—   Transport Property
—   Vertical Position

7.3.1.1.   Access Restriction (AccessRestriction)

A restriction on the access to a transport element.

This type is a sub-type of TransportProperty.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE ACCESSRESTRICTION

Attribute	Definition	Type	Voidability
restriction	Nature of the access restriction.	AccessRestrictionValue	

7.3.1.2.   Condition Of Facility (ConditionOfFacility)

State of a transport network element with regards to its completion and use.

This type is a sub-type of TransportProperty.

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ATTRIBUTES OF THE SPATIAL OBJECT TYPE CONDITIONOFFACILITY

Attribute	Definition	Type	Voidability
currentStatus	Current status value of a transport network element with regards to its completion and use.	ConditionOfFacilityValue	

7.3.1.3. Maintenance Authority (MaintenanceAuthority)

The authority responsible for maintenance of the transport element.

This type is a sub-type of TransportProperty.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE MAINTENANCEAUTHORITY

Attribute	Definition	Type	Voidability
authority	Identification of the maintenance authority.	CI_Citation	

7.3.1.4. Marker Post (MarkerPost)

Reference marker placed along a route in a transport network, mostly at regular intervals, indicating the distance from the beginning of the route, or some other reference point, to the point where the marker is located.

This type is a sub-type of TransportPoint.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE MARKERPOST

Attribute	Definition	Type	Voidability
location	Distance from the beginning of the route, or some other reference point, to the point where a marker post is located.	Distance	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE MARKERPOST

Association role	Definition	Type	Voidability
route	Route in a transport network along which the marker post is placed.	TransportLinkSet	voidable

7.3.1.5. Owner Authority (OwnerAuthority)

The authority owning the transport element.

This type is a sub-type of TransportProperty.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE OWNERAUTHORITY

Attribute	Definition	Type	Voidability
authority	Identification of the owning authority.	CI_Citation	

7.3.1.6. Restriction For Vehicles (RestrictionForVehicles)

Restriction on vehicles on a transport element.

This type is a sub-type of TransportProperty.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE RESTRICTIONFORVEHICLES

Attribute	Definition	Type	Voidability
measure	The measure for the restriction.	Measure	
restrictionType	The type of restriction.	RestrictionTypeValue	

7.3.1.7. Traffic Flow Direction (TrafficFlowDirection)

Indicates the direction of the flow of traffic in relation to the direction of the transport link vector.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type TrafficFlowDirection

Attribute	Definition	Type	Voidability
direction	Indicates the direction of the flow of traffic.	LinkDirectionValue	

Constraints of the spatial object type TrafficFlowDirection

This property can only be associated with a spatial object of the type Link or LinkSequence.

7.3.1.8. Transport Area (TransportArea)

Surface that represents the spatial extent of an element of a transport network.

This type is a sub-type of NetworkArea.

This type is a sub-type of TransportObject.

This type is abstract.

Attributes of the spatial object type TransportArea

Attribute	Definition	Type	Voidability

validFrom	The time when the transport area started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport area no longer exists in the real world.	DateTime	voidable

Constraints of the spatial object type TransportArea

All transport areas have an external object identifier.

7.3.1.9. Transport Link (TransportLink)

A linear spatial object that describes the geometry and connectivity of a transport network between two points in the network.

This type is a sub-type of Link.

This type is a sub-type of TransportObject.

This type is abstract.
Attributes of the spatial object type TransportLink

Attribute	Definition	Type	Voidability
validFrom	The time when the transport link started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport link no longer exists in the real world.	DateTime	voidable

Constraints of the spatial object type TransportLink

All transport links have an external object identifier.

7.3.1.10. Transport Link Sequence (TransportLinkSequence)

A linear spatial object, composed of an ordered collection of transport links, which represents a continuous path in the transport network without any branches. The element has a defined beginning and end and every position on the transport link sequence is identifiable with one single parameter such as length. It describes an element of the transport network, characterized by one or more thematical identifiers and/or properties.

This type is a sub-type of LinkSequence.

This type is a sub-type of TransportObject.

This type is abstract.
Attributes of the spatial object type TransportLinkSequence

Attribute	Definition	Type	Voidability
validFrom	The time when the transport link sequence started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport link sequence no longer exists in the real world.	DateTime	voidable

Constraints of the spatial object type TransportLinkSequence

A transport link sequence must be composed of transport links that all belong to the same transport network.

All transport link sequences have an external object identifier.

7.3.1.11. Transport Link Set (TransportLinkSet)

A collection of transport link sequences and or individual transport links that has a specific function or significance in a transport network.

This type is a sub-type of LinkSet.

This type is a sub-type of TransportObject.

This type is abstract.

Attributes of the spatial object type TransportLinkSet

Attribute	Definition	Type	Voidability
validFrom	The time when the transport link set started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport link set no longer exists in the real world.	DateTime	voidable

Association roles of the spatial object type TransportLinkSet

Association role	Definition	Type	Voidability
post	Marker post along a route in a transport network.	MarkerPost	voidable

Constraints of the spatial object type TransportLinkSet

A transport link set must be composed of transport links and or transport link sequences that all belong to the same transport network.

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All transport link sets have an external object identifier.

7.3.1.12. Transport Network (TransportNetwork)

Collection of network elements that belong to a single mode of transport.

This type is a sub-type of Network.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE TRANSPORTNETWORK

Attribute	Definition	Type	Voidability
inspireId	External object identifier of the spatial object.	Identifier	
typeOfTransport	Type of transport network, based on the type of infrastructure the network uses.	TransportTypeValue	

7.3.1.13. Transport Node (TransportNode)

A point spatial object which is used for connectivity.

This type is a sub-type of Node.

This type is a sub-type of TransportObject.

This type is abstract.

Attributes of the spatial object type TransportNode

Attribute	Definition	Type	Voidability
validFrom	The time when the transport node started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport node no longer exists in the real world.	DateTime	voidable

Constraints of the spatial object type TransportNode

All transport nodes have an external object identifier.

7.3.1.14. Transport Object (TransportObject)

An identity base for transport network objects in the real world.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE TRANSPORTOBJECT

Attribute	Definition	Type	Voidability

| geographicalName | A geographical name that is used to identify the transport network object in the real world. It provides a 'key' for implicitly associating different representations of the object. | GeographicalName | voidable |

7.3.1.15. Transport Point (TransportPoint)

A point spatial object - which is not a node - that represents the position of an element of a transport network.

This type is a sub-type of NetworkElement.

This type is a sub-type of TransportObject.

This type is abstract.

Attributes of the spatial object type TransportPoint

Attribute	Definition	Type	Voidability
geometry	The location of the transport point.	GM_Point	
validFrom	The time when the transport point started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport point no longer exists in the real world.	DateTime	voidable

Constraints of the spatial object type TransportPoint

All transport points have an external object identifier.

7.3.1.16. Transport Property (TransportProperty)

A reference to a property that falls upon the network. This property can apply to the whole of the network element it is associated with or - for linear spatial objects - be described using linear referencing.

This type is a sub-type of NetworkProperty.

This type is abstract.

Attributes of the spatial object type TransportProperty

Attribute	Definition	Type	Voidability

validFrom	The time when the transport property started to exist in the real world.	DateTime	voidable
validTo	The time from which the transport property no longer exists in the real world.	DateTime	voidable

Constraints of the spatial object type TransportProperty

All transport properties have an external object identifier.

7.3.1.17. Vertical Position (VerticalPosition)

Vertical level relative to other transport network elements.

This type is a sub-type of TransportProperty.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE VERTICALPOSITION

Attribute	Definition	Type	Voidability
verticalPosition	Relative vertical position of the transport element.	VerticalPositionValue	

7.3.2. *Enumerations*

7.3.2.1. Transport Type (TransportTypeValue)

Possible types of transport networks.

ALLOWED VALUES FOR THE ENUMERATION TRANSPORTTYPEVALUE

Value	Definition
air	The transport network consists of transport by air.
cable	The transport network consists of transport by cable.
rail	The transport network consists of transport by rail.
road	The transport network consists of transport by road.
water	The transport network consists of transport by water.

7.3.3. *Code Lists*

7.3.3.1. Access Restriction (AccessRestrictionValue)

Types of access restrictions for a transport element.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] ACCESSRESTRICTIONVALUE

Value	Definition
forbiddenLegally	Access to the transport element is forbidden by law.
physicallyImpossible	Access to the transport element is physically impossible due to the presence of barriers or other physical obstacles.
private	Access to the transport element is restricted because it is privately owned.
publicAccess	The transport element is open to public access.
seasonal	Access to the transport element depends on the season.
toll	Access to the transport element is subject to toll.]

7.3.3.2.   Restriction Type (RestrictionTypeValue)

Possible restrictions on vehicles that can access a transport element.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] RESTRICTIONTYPEVALUE

Value	Definition
maximumDoubleAxleWeight	The maximum weight per double axle of a vehicle allowed at a transport element.
maximumDraught	The maximum draught of a vehicle allowed on a transport element.
maximumFlightLevel	The maximum flight level allowed for a vehicle at a transport element.
maximumHeight	The maximum height of a vehicle which can pass under another object.
maximumLength	The maximum length of a vehicle allowed at a transport element.
maximumSingleAxleWeight	The maximum weight per single axle of a vehicle allowed at a transport element.
maximumTotalWeight	The maximum total weight of a vehicle allowed at a transport element.

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maximumTripleAxleWeight	The maximum weight per triple axle of a vehicle allowed at a transport element.
maximumWidth	The maximum width of a vehicle allowed on a transport element.
minimumFlightLevel	The minimum flight level allowed for a vehicle at a transport element.**]**

7.4. **Air Transport Network**

7.4.1. *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Air Transport Network:
— Aerodrome Area
— Aerodrome Category
— Aerodrome Node
— Aerodrome Type
— Air Link
— Air Link Sequence
— Air Node
— Air Route
— Air Route Link
— Airspace Area
— Apron Area
— Condition of Air Facility
— Designated Point
— Element Length
— Element Width
— Field Elevation
— Instrument Approach Procedure
— Lower Altitude Limit
— Navaid
— Procedure Link
— Runway Area
— Runway Centreline Point
— Standard Instrument Arrival
— Standard Instrument Departure
— Surface Composition
— Taxiway Area
— Touch Down Lift Off Area
— Upper Altitude Limit
— Use Restriction

7.4.1.1. Aerodrome Area (AerodromeArea)

A defined area on land or water (including any buildings, installations and equipment) intended to be used either wholly or in part for the arrival, departure and surface movement of aircraft and/or helicopters.

This type is a sub-type of TransportArea.

7.4.1.2.   Aerodrome Category (AerodromeCategory)

Aerodrome category concerning the scope and importance of the air traffic services offered from and to it.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type AerodromeCategory

Attribute	Definition	Type	Voidability
aerodromeCategory	Value which indicates the category of an aerodrome.	AerodromeCategoryValue	

Constraints of the spatial object type AerodromeCategory

This property can only be associated with a spatial object that is an Aerodrome Node or an Aerodrome Area.

7.4.1.3.   Aerodrome Node (AerodromeNode)

Node located at the aerodrome reference point of an airport/heliport, which is used to represent it in a simplified way.

This type is a sub-type of AirNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE AERODROMENODE

Attribute	Definition	Type	Voidability
designatorIATA	The three letter IATA designator of the aerodrome (airport/heliport).	CharacterString	voidable
locationIndicatorICAO	The four letter ICAO location indicator of the aerodrome (airport/heliport), as listed in ICAO DOC 7910.	CharacterString	voidable

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE AERODROMENODE

Association role	Definition	Type	Voidability
controlTowers	The set of control towers belonging to an aerodrome (airport/heliport).	Type to be specified in the spatial data theme Buildings	voidable

7.4.1.4.   Aerodrome Type (AerodromeType)

A code specifying the type of aerodrome.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type AerodromeType

Attribute	Definition	Type	Voidability
aerodromeType	The type of aerodrome.	AerodromeTypeValue	

Constraints of the spatial object type AerodromeType

This property can only be associated with a spatial object that is an Aerodrome Node or Aerodrome Area.

7.4.1.5.   Air Link (AirLink)

A linear spatial object that describes the geometry and connectivity of the air network between two points in the network.

This type is a sub-type of TransportLink.

This type is abstract.

7.4.1.6.   Air Link Sequence (AirLinkSequence)

A linear spatial object, composed of an ordered collection of air links, which represents a continuous path in the air network without any branches.

This type is a sub-type of TransportLinkSequence.

7.4.1.7.   Air Node (AirNode)

A node which occurs in an air network.

This type is a sub-type of TransportNode.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE AIRNODE

Attribute	Definition	Type	Voidability
significantPoint	Attribute which indicates whether the air node is or is not a significant point.	Boolean	

7.4.1.8.   Air Route (AirRoute)

A specified route designed for channelling the flow of traffic as necessary for the provision of air traffic services, from the end of the take-off and initial climb phase to the commencement of the approach and landing phase.

This type is a sub-type of TransportLinkSet.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE AIRROUTE

Attribute	Definition	Type	Voidability
airRouteType	Route classification.	AirRouteTypeValue	voidable
designator	Code or designator that identifies an Air Route.	CharacterString	voidable

7.4.1.9.   Air Route Link (AirRouteLink)

A portion of a route to be flown usually without an intermediate stop, as defined by two consecutive significant points.

This type is a sub-type of AirLink.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE AIRROUTELINK

Attribute	Definition	Type	Voidability
airRouteLinkClass	The class or type of an air route link.	AirRouteLinkClassValue	voidable

7.4.1.10. Airspace Area (AirspaceArea)

A defined volume in the air, described as horizontal projection with vertical limits.

This type is a sub-type of TransportArea.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE AIRSPACEAREA

Attribute	Definition	Type	Voidability
AirspaceAreaType	A code indicating the general structure or characteristics of a particular airspace.	AirspaceAreaTypeValue	

7.4.1.11. Apron Area (ApronArea)

A defined area, on a land aerodrome/heliport, intended to accommodate aircraft/helicopters for purposes of loading and unloading passengers, mail or cargo, and for fuelling, parking or maintenance.

This type is a sub-type of TransportArea.

7.4.1.12. Condition Of Air Facility (ConditionOfAirFacility)

State of an air transport network element with regards to its completion and use.

This type is a sub-type of ConditionOfFacility.
Constraints of the spatial object type ConditionOfAirFacility

This property can only be associated with a spatial object that is an Aerodrome Node, an Aerodrome Area or a Runway Area.

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7.4.1.13. Designated Point (DesignatedPoint)

A geographical location not marked by the site of a radio navigation aid, used in defining an ATS route, the flight path of an aircraft or for other navigation or ATS purposes.

This type is a sub-type of AirNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE DESIGNATEDPOINT

Attribute	Definition	Type	Voidability
designator	The coded designator of the point.	CharacterString	voidable

7.4.1.14. Element Length (ElementLength)

The physical length of the element.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type ElementLength

Attribute	Definition	Type	Voidability
length	The physical length of the element.	Measure	

Constraints of the spatial object type ElementLength

This property can only be associated with a spatial object that is a Runway Area, Taxiway Area or Touch Down Lift Off Area.

7.4.1.15. Element Width (ElementWidth)

The physical width of the element.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type ElementWidth

Attribute	Definition	Type	Voidability
width	The physical width of the element.	Measure	

Constraints of the spatial object type ElementWidth

This property can only be associated with a spatial object that is a Runway Area, Taxiway Area or Touch Down Lift Off Area.

7.4.1.16. Field Elevation (FieldElevation)

The aerodrome elevation as the vertical distance between the highest point of the landing area of an aerodrome and mean sea level.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type FieldElevation

Attribute	Definition	Type	Voidability
altitude	Value of the field altitude.	Measure	

Constraints of the spatial object type FieldElevation

This property can only be associated with a spatial object that is an Aerodrome Node or Aerodrome Area.

7.4.1.17. Instrument Approach Procedure (InstrumentApproachProcedure)

A series of predetermined manoeuvres by reference to flight instruments with specified protection from obstacles from the initial approach fix, or where applicable, from the beginning of a defined arrival route to a point from which a landing can be completed and thereafter, if a landing is not completed, to a position at which holding or en route obstacle clearance criteria apply.

This type is a sub-type of ProcedureLink.

7.4.1.18. Lower Altitude Limit (LowerAltitudeLimit)

Altitude that defines the lower limit of an air transport network object.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type LowerAltitudeLimit

Attribute	Definition	Type	Voidability
altitude	Value of the altitude limit.	Measure	

Constraints of the spatial object type LowerAltitudeLimit

This property can only be associated with a spatial object that is an Air Route Link or Airspace Area.

7.4.1.19. Navaid (Navaid)

One or more Navaid Equipments providing navigation services.

This type is a sub-type of AirNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE NAVAID

Attribute	Definition	Type	Voidability
designator	The coded identifier given to the navaid system.	CharacterString	voidable
navaidType	Type of the navaid service.	NavaidTypeValue	voidable

7.4.1.20. Procedure Link (ProcedureLink)

A series of predetermined manoeuvres with specified protection from obstacles.

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This type is a sub-type of AirLink.

7.4.1.21. Runway Area (RunwayArea)

A defined rectangular area on a land aerodrome/heliport prepared for the landing and take-off of aircraft.

This type is a sub-type of TransportArea.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE RUNWAYAREA

Attribute	Definition	Type	Voidability
designator	The full textual designator of the runway, used to uniquely identify it at an aerodrome/ heliport which has more than one.	CharacterString	voidable
runwayType	The type of runway, either runway for airplanes or final approach and take off area (FATO) for helicopters.	RunwayTypeValue	voidable

7.4.1.22. Runway Centreline Point (RunwayCentrelinePoint)

An operationally significant position on the centreline of a runway direction.

This type is a sub-type of AirNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE RUNWAYCENTRELINEPOINT

Attribute	Definition	Type	Voidability
pointRole	The role of the point along the runway direction centreline.	PointRoleValue	

7.4.1.23. Standard Instrument Arrival (StandardInstrumentArrival)

A designated instrument flight rule (IFR) arrival route linking a significant point, normally on an ATS route, with a point from which a published instrument approach procedure can be commenced.

This type is a sub-type of ProcedureLink.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE STANDARDINSTRUMENTARRIVAL

Attribute	Definition	Type	Voidability
designator	The textual designator of the	CharacterString	voidable

Standard Instrument Arrival.			

7.4.1.24. Standard Instrument Departure (StandardInstrumentDeparture)

A designated instrument flight rule (IFR) departure route linking the aerodrome or a specific runway of the aerodrome with a specified significant point, normally on a designated ATS route, at which the en-route phase of a flight commences.

This type is a sub-type of ProcedureLink.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE STANDARDINSTRUMENTDEPARTURE

Attribute	Definition	Type	Voidability
designator	The full textual designator of the Standard Instrument Departure.	CharacterString	voidable

7.4.1.25. Surface Composition (SurfaceComposition)

The composition of an aerodrome/heliport related surface.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type SurfaceComposition

Attribute	Definition	Type	Voidability
surfaceComposition	A code indicating the composition of an aerodrome/heliport related surface.	SurfaceCompositionValue	

Constraints of the spatial object type SurfaceComposition

This property can only be associated with a spatial object that is a Runway Area, Taxiway Area, Apron Area or Touch Down Lift Off Area.

7.4.1.26. Taxiway Area (TaxiwayArea)

A defined path at an aerodrome/heliport established for the taxiing of aircraft/helicopters and intended to provide a link between one part of the aerodrome and another.

This type is a sub-type of TransportArea.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE TAXIWAYAREA

Attribute	Definition	Type	Voidability
designator	The textual designator of the taxiway.	CharacterString	voidable

7.4.1.27. Touch Down Lift Off Area (TouchDownLiftOff)

A load bearing area on which a helicopter may touch down or lift-off.

This type is a sub-type of AirNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE TOUCHDOWNLIFTOFF

Attribute	Definition	Type	Voidability
designator	The textual designator of the touch down and lift-off area.	CharacterString	voidable

7.4.1.28. Upper Altitude Limit (UpperAltitudeLimit)

Altitude that defines the upper limit of an air transport network object.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type UpperAltitudeLimit

Attribute	Definition	Type	Voidability
altitude	Value of the altitude limit.	Measure	

Constraints of the spatial object type UpperAltitudeLimit

This property can only be associated with a spatial object that is an Air Route Link or Airspace Area.

7.4.1.29. Use Restriction (UseRestriction)

The restrictions to the use of an air network object.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type UseRestriction

Attribute	Definition	Type	Voidability
restriction	The type of use restriction for the air network object.	AirUseRestrictionValue	

Constraints of the spatial object type UseRestriction

This property can only be associated with a spatial object that is an Air Route, Air Link (or specialized Air Link), Air Node (or specialized Air Node) or Aerodrome Area.

7.4.2.   *Code Lists*

7.4.2.1.   Aerodrome Category (AerodromeCategoryValue)

Aerodrome possible categories concerning the scope and importance of the air traffic services offered from and to it.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST] AERODROMECATEGORYVALUE

Value	Definition
domesticNational	Aerodrome serving domestic national air traffic services.
domesticRegional	Aerodrome serving domestic regional air traffic services.
international	Aerodrome serving international air traffic services.**]**

7.4.2.2.   Aerodrome Type (AerodromeTypeValue)

A code specifying whether a particular entity occurrence is an Aerodrome or a Heliport.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST] AERODROMETYPEVALUE

Value	Definition
aerodromeHeliport	Aerodrome with heliport landing area.
aerodromeOnly	Aerodrome only.
heliportOnly	Heliport only.
landingSite	Landing site.**]**

7.4.2.3.   Air Route Link Class (AirRouteLinkClassValue)

The type of the route from the navigation point of view.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST] AIRROUTELINKCLASSVALUE

Value	Definition
conventional	Conventional navigation route: An air route which does neither use Area Navigation nor TACAN navigation for air traffic services.
RNAV	Area navigation route: An air route which uses Area Navigation (RNAV) for air traffic services.
TACAN	TACAN route: An air route which uses TACAN Navigation for air traffic services.**]**

7.4.2.4.   Air Route Type (AirRouteTypeValue)

The route classification as ATS route or North Atlantic Tracks.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] AIRROUTETYPEVALUE

Value	Definition
ATS	ATS Route as described in ICAO Annex 11.
NAT	North Atlantic Track (part of Organized Track System).]

7.4.2.5. Air Use Restriction (AirUseRestrictionValue)

The use restrictions for an air network object.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] AIRUSERESTRICTIONVALUE

Value	Definition
reservedForMilitary	The air network object is exclusively for military use.
temporalRestrictions	The temporal restrictions apply to the use of the air network object.]

7.4.2.6. Airspace Area Type (AirspaceAreaTypeValue)

Recognised types of Airspace.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] AIRSPACEAREATYPEVALUE

Value	Definition
ATZ	Airport Traffic Zone. Airspace of defined dimensions established around an airport for the protection of airport traffic.
CTA	Control area. A controlled airspace extending upwards from a specified limit above the earth.
CTR	Control zone. A controlled airspace extending upwards from the surface of the earth to a specified upper limit.
D	Danger area. Airspace of defined dimensions within which activities dangerous to the flight of aircraft may exist at specified times.

FIR	Flight information region. Airspace of defined dimensions within which flight information service and alerting service are provided. Might, for example, be used if service provided by more than one unit.
P	Prohibited area. Airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is prohibited.
R	Restricted area. Airspace of defined dimensions, above the land areas or territorial waters of a State, within which the flight of aircraft is restricted in accordance with certain specified conditions.
TMA	Terminal control area. Control area normally established at the confluence of ATS routes in the vicinity of one or more major aerodromes. Mainly used in Europe under the Flexible Use of Airspace concept.
UIR	Upper flight information region (UIR). An upper airspace of defined dimensions within which flight information service and alerting service are provided. Each state determines its definition for upper airspace.**]**

7.4.2.7. Navaid Type (NavaidTypeValue)

Types of Navaid Services.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** NAVAIDTYPEVALUE

Value	Definition
DME	Distance Measuring Equipment.
ILS	Instrument Landing System.
ILS-DME	ILS with collocated DME.
LOC	Localizer.
LOC-DME	LOC and DME collocated.
MKR	Marker Beacon.
MLS	Microwave Landing System.
MLS-DME	MLS with collocated DME.
NDB	Non-Directional Radio Beacon.
NDB-DME	NDB and DME collocated.

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NDB-MKR	Non-Directional Radio Beacon and Marker Beacon.
TACAN	Tactical Air Navigation Beacon.
TLS	Transponder Landing System.
VOR	VHF Omnidirectional Radio Range.
VOR-DME	VOR and DME collocated.
VORTAC	VOR and TACAN collocated.**]**

7.4.2.8.   Point Role (PointRoleValue)

Role of the Runway Centreline Point.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** POINTROLEVALUE

Value	**Definition**
end	Physical end of a runway direction.
mid	The mid point of the runway.
start	Physical start of a runway direction.
threshold	The beginning of that portion of the runway usable for landing.**]**

7.4.2.9.   Runway Type (RunwayTypeValue)

A code that makes a distinction between runways for airplanes and FATO for helicopters.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** RUNWAYTYPEVALUE

Value	**Definition**
FATO	Final Approach and Take Off Area for helicopters.
runway	Runway for airplanes.**]**

7.4.2.10. Surface Composition (SurfaceCompositionValue)

A code indicating the composition of a surface.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** SURFACECOMPOSITIONVALUE

Value	**Definition**

asphalt	Surface made of an asphalt layer.
concrete	Surface made of a concrete layer.
grass	Surface consisting of a grass layer.**]**

7.5.   **Cable Transport Network**

7.5.1.   *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Cable Transport Network:
—   Cableway Link
—   Cableway Link Sequence
—   Cableway Link Set
—   Cableway Node

7.5.1.1.   Cableway Link (CablewayLink)

Linear spatial object that describes the geometry and connectivity of a cable network between two points in a cableway transport network.

This type is a sub-type of TransportLink.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE CABLEWAYLINK

Attribute	Definition	Type	Voidability
cablewayType	The type of a cableway transport.	CablewayTypeValue	voidable

7.5.1.2.   Cableway Link Sequence (CablewayLinkSequence)

An ordered collection of cableway links that are characterized by one or more thematic identifiers and/or properties.

This type is a sub-type of TransportLinkSequence.

7.5.1.3.   Cableway Link Set (CablewayLinkSet)

A collection of cableway link sequences and or individual cableway links that has a specific function or significance in a cable transport network.

This type is a sub-type of TransportLinkSet.

7.5.1.4.   Cableway Node (CablewayNode)

A point spatial object that is used to represent connectivity between two consecutive cableway links.

This type is a sub-type of TransportNode.

7.5.2.   *Code Lists*

7.5.2.1.   Cableway Type (CablewayTypeValue)

The possible types of cableway transport.

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[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] CABLEWAYTYPEVALUE

Value	Definition
cabinCableCar	A cableway transport whose vehicles consist of a suspended cabin for carrying groups of people and/or goods inside it from one location to another.
chairLift	A cableway transport whose vehicles consist of suspended chairs for carrying individuals or groups of people from one location to another via a steel cable or rope which is looped around two points.
skiTow	A cableway transport for pulling skiers and snowboarders uphill.]

7.6. Railway Transport Network

7.6.1. *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Railway Transport Network:
—   Design Speed
—   Nominal Track Gauge
—   Number of Tracks
—   Railway Area
—   Railway Electrification
—   Railway Line
—   Railway Link
—   Railway Link Sequence
—   Railway Node
—   Railway Station Area
—   Railway Station Code
—   Railway Station Node
—   Railway Type
—   Railway Use
—   Railway Yard Area
—   Railway Yard Node

7.6.1.1. Design Speed (DesignSpeed)

The specification of the maximum speed to which a railway line is designed for.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type DesignSpeed

Attribute	Definition	Type	Voidability

| speed | The specification of the maximum speed to which a railway line is designed for. | Velocity | |

Constraints of the spatial object type DesignSpeed

This property can only be associated with a spatial object that is part of a railway transport network.

7.6.1.2. Nominal Track Gauge (NominalTrackGauge)

The nominal distance between the two outer rails (gauge) of a railway track.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type NominalTrackGauge

Attribute	Definition	Type	Voidability
nominalGauge	A single value that identifies the track gauge.	Measure	voidable
nominalGaugeCategory	Provision of the gauge of a railway track as a fuzzy category with respect to the European standard nominal gauge.	TrackGaugeCategoryValue	voidable

Constraints of the spatial object type NominalTrackGauge

This property can only be associated with a spatial object that is part of a railway transport network.

7.6.1.3. Number Of Tracks (NumberOfTracks)

The number of tracks for a railway stretch.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type NumberOfTracks

Attribute	Definition	Type	Voidability
minMaxNumberOfTracks	Indicates whether the number of tracks are counted as minimum or maximum value.	MinMaxTrackValue	voidable
numberOfTracks	The number of tracks present.	Integer	

Constraints of the spatial object type NumberOfTracks

This property can only be associated with a spatial object that is part of a railway transport network.

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7.6.1.4. Railway Area (RailwayArea)

Surface occupied by a railway track, including ballast.

This type is a sub-type of TransportArea.

7.6.1.5. Railway Electrification (RailwayElectrification)

Indication whether the railway is provided with an electric system to power vehicles moving along it.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RailwayElectrification

Attribute	Definition	Type	Voidability
electrified	Indicates whether the railway is provided with an electric system to power vehicles moving along it.	Boolean	

Constraints of the spatial object type RailwayElectrification

This property can only be associated with a spatial object that is part of a railway transport network.

7.6.1.6. Railway Line (RailwayLine)

A collection of railway link sequences and or individual railway links that are characterized by one or more thematical identifiers and/or properties.

This type is a sub-type of TransportLinkSet.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE RAILWAYLINE

Attribute	Definition	Type	Voidability
railwayLineCode	A code assigned to a railway line which is unique within a Member State.	CharacterString	voidable

7.6.1.7. Railway Link (RailwayLink)

A linear spatial object that describes the geometry and connectivity of a railway network between two points in the network.

This type is a sub-type of TransportLink.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE RAILWAYLINK

Attribute	Definition	Type	Voidability

fictitious	The railway link does not represent a real and existing railway track but a fictitious trajectory.	Boolean	voidable

7.6.1.8. Railway Link Sequence (RailwayLinkSequence)

A linear spatial object, composed of an ordered collection of railway links, which represents a continuous path in a railway network without any branches. The element has a defined beginning and end and every position on the railway link sequence is identifiable with one single parameter such as length. It describes an element of the railway network, characterized by one or more thematical identifiers and/or properties.

This type is a sub-type of TransportLinkSequence.

7.6.1.9. Railway Node (RailwayNode)

A point spatial object which represents a significant point along the railway network or defines an intersection of railway tracks used to describe its connectivity.

This type is a sub-type of TransportNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE RAILWAYNODE

Attribute	Definition	Type	Voidability
formOfNode	The function of a railway node within the railway network.	FormOfRailwayNodeValue	voidable

7.6.1.10. Railway Station Area (RailwayStationArea)

An area spatial object which is used to represent the topographical limits of the facilities of a railway station (buildings, railway yards, installations and equipment) devoted to carry out railway station operations.

This type is a sub-type of TransportArea.

7.6.1.11. Railway Station Code (RailwayStationCode)

The unique code assigned to a railway station.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RailwayStationCode

Attribute	Definition	Type	Voidability
stationCode	A unique code assigned to a railway station.	CharacterString	

Constraints of the spatial object type RailwayStationCode

This property can only be associated with a spatial object that is part of a railway transport network.

7.6.1.12. Railway Station Node (RailwayStationNode)

A railway node which represents the location of a railway station along the railway network.

This type is a sub-type of RailwayNode.

Attributes of the spatial object type RailwayStationNode

Attribute	Definition	Type	Voidability
numberOfPlatforms	A value indicating the number of platforms available at a railway station.	Integer	voidable

Constraints of the spatial object type RailwayStationNode

For a railway station node, the value for the 'formOfNode' attribute shall always be 'RailwayStop'.

7.6.1.13. Railway Type (RailwayType)

The type of railway transport the line is designed for.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RailwayType

Attribute	Definition	Type	Voidability
type	The type of railway transport to which the line is designed for.	RailwayTypeValue	

Constraints of the spatial object type RailwayType

This property can only be associated with a spatial object that is part of a railway transport network.

7.6.1.14. Railway Use (RailwayUse)

The current use of the railway.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RailwayUse

Attribute	Definition	Type	Voidability
use	The current use of the railway.	RailwayUseValue	

Constraints of the spatial object type RailwayUse

This property can only be associated with a spatial object that is part of a railway transport network.

7.6.1.15. Railway Yard Area (RailwayYardArea)

An area spatial object which is used to represent the topographical limits of a railway yard.

This type is a sub-type of TransportArea.

7.6.1.16. Railway Yard Node (RailwayYardNode)

A railway node which occurs within a railway yard area.

This type is a sub-type of RailwayNode.
Constraints of the spatial object type RailwayYardNode

For a railway yard node, the value for the 'formOfNode' attribute shall always be 'RailwayStop'.

7.6.2. *Enumerations*

7.6.2.1. Minimum Or Maximum Track Number (MinMaxTrackValue)

Values to indicate whether number of tracks are counted as the maximum, minimum or average number.

ALLOWED VALUES FOR THE ENUMERATION MINMAXTRACKVALUE

Value	Definition
average	The number of tracks is the average value for a given part of the railway network.
maximum	The number of tracks is the maximum value for a given part of the railway network.
minimum	The number of tracks is the minimum value for a given part of the railway network.

7.6.2.2. Track Gauge Category (TrackGaugeCategoryValue)

The possible categories of railways concerning its nominal track gauge.

ALLOWED VALUES FOR THE ENUMERATION TRACKGAUGECATEGORYVALUE

Value	Definition
broad	The nominal track gauge property is broader than the standard one.
standard	The nominal track gauge property is equal to the European standard (1 435 millimetres).
narrow	The nominal track gauge property is narrower than the standard one.
notApplicable	The definition of a nominal track gauge property is not applicable to the type of railway transport.

7.6.3. *Code Lists*

7.6.3.1. Form Of Railway Node (FormOfRailwayNodeValue)

The possible functions of a railway node within the railway network.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] FORMOFRAILWAYNODEVALUE

Value	Definition
junction	A railway node where the railway network has a mechanism consisting on a railroad track with two movable rails and the necessary connections, which let vehicles turn from one track to another.
levelCrossing	A railway node where the railway network is a crossed by a road at the same level.
pseudoNode	A railway node which represents a point where one or more attributes of the railway links connected to it change their value, or a point necessary to describe the geometry of the network.
railwayEnd	Only one railway link connects to the railway node. It signifies the end of a railway line.
railwayStop	A place in the railway network where trains stop to load/unload cargo or to let passengers get on and off the train.]

7.6.3.2. Railway Type (RailwayTypeValue)

The possible types of railway transport.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] RAILWAYTYPEVALUE

Value	Definition
cogRailway	A railway transport which allows the vehicles to operate on steep gradients, consisting of a railway provided with a toothed rack rail (usually between the running rails) where vehicles are fitted with one or more cog wheels or pinions that mesh with this rack rail.
funicular	A railway transport consisting of a cable attached to a vehicle on rails which moves them up and down a very steep slope. Where possible the ascending and descending vehicles counterbalance each other.
magneticLevitation	A railway transport based on a single rail which acts as guideway of a vehicle and

	supports it by means of a magnetic levitation mechanism.
metro	An urban railway transport system used in large urban areas, which runs on a separate track from other transport systems, is usually electrically powered and in some cases runs under ground.
monorail	A railway transport based on a single rail which acts as both its only support and guideway.
suspendedRail	A railway transport based on a single rail, acting as both support and guideway, from which a vehicle is suspended to move along the railway.
train	A railway transport usually consisting of two parallel rails on which a powered-vehicle or train machine pulls a connected series of vehicles to move them along the railway in order to transport freight or passengers from one destination to another.
tramway	A railway transport system used in urban areas, which often runs at street level, sharing road space with motor traffic and pedestrians. Tramways are usually electrically powered.**]**

7.6.3.3.   Railway Use (RailwayUseValue)

The possible uses of railways.

[^{F1}The allowed values for this code list comprise only the values in the table below.**]**

[^{F4}**[**^{F1}VALUES FOR THE CODE LIST**]** RAILWAYUSEVALUE

Value	**Definition**
cargo	The use of railway is exclusively for cargo operations.
carShuttle	The use of railway is exclusively to perform car shuttle transport.
mixed	The use of railway is mixed. It is used to transport passengers and cargo.
passengers	The use of railway is exclusively to transport passengers.**]**

7.7.   **Road Transport Network**

7.7.1.   *Spatial Object Types*

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The following spatial object types shall be used for the exchange and classification of spatial objects related to Road Transport Network:

— E-Road
— Form of Way
— Functional Road Class
— Number of Lanes
— Road
— Road Area
— Road Link
— Road Link Sequence
— Road Name
— Road Node
— Road Service Area
— Road Service Type
— Road Surface Category
— Road Width
— Speed Limit
— Vehicle Traffic Area

7.7.1.1. E-Road (ERoad)

A collection of road link sequences and or individual road links that represents a route that is part of the international E-road network, characterized by its European route number.

This type is a sub-type of TransportLinkSet.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE EROAD

Attribute	Definition	Type	Voidability
europeanRouteNumber	Code, identifying the route in the international E-road network. The code always starts with a letter 'E', followed by a one-, two- or three-digit number.	CharacterString	voidable

7.7.1.2. Form Of Way (FormOfWay)

A classification based on the physical properties of the Road Link.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type FormOfWay

Attribute	Definition	Type	Voidability
formOfWay	Physical form of the way.	FormOfWayValue	

Constraints of the spatial object type FormOfWay

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.3.   Functional Road Class (FunctionalRoadClass)

A classification based on the importance of the role that the road performs in the road network.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type FunctionalRoadClass

Attribute	Definition	Type	Voidability
functionalClass	Functional rank of the road link in the road network.	FunctionalRoadClassValue	

Constraints of the spatial object type FunctionalRoadClass

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.4.   Number Of Lanes (NumberOfLanes)

The number of lanes of a road element.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type NumberOfLanes

Attribute	Definition	Type	Voidability
direction	Indicates which direction the number of lanes is valid for.	LinkDirectionValue	voidable
minMaxNumberOfLanes	Indicates if the number of lanes is counted as minimum or maximum value.	MinMaxLaneValue	voidable
numberOfLanes	Number of lanes.	Integer	

Constraints of the spatial object type NumberOfLanes

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.5.   Road (Road)

A collection of road link sequences and/or individual road links that are characterized by one or more thematic identifiers and/or properties.

This type is a sub-type of TransportLinkSet.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE ROAD

Attribute	Definition	Type	Voidability
localRoadCode	Identification code assigned to the road by the local road authority.	CharacterString	voidable

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nationalRoadCode	The national number of the road.	CharacterString	voidable

7.7.1.6. Road Area (RoadArea)

Surface which extends to the limits of a road, including vehicular areas and other parts of it.

This type is a sub-type of TransportArea.

7.7.1.7. Road Link (RoadLink)

A linear spatial object that describes the geometry and connectivity of a road network between two points in the network. Road links can represent paths, bicycle roads, single carriageways, multiple carriageway roads and even fictitious trajectories across traffic squares.

This type is a sub-type of TransportLink.

7.7.1.8. Road Link Sequence (RoadLinkSequence)

A linear spatial object, composed of an ordered collection of road links, which represents a continuous path in a road network without any branches. The element has a defined beginning and end and every position on the road link sequence is identifiable with one single parameter such as length. It describes an element of the road network, characterized by one or more thematic identifiers and/or properties.

This type is a sub-type of TransportLinkSequence.

7.7.1.9. Road Name (RoadName)

Name of a road, as assigned by the responsible authority.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type RoadName

Attribute	Definition	Type	Voidability
name	Name of the road.	GeographicalName	

Constraints of the spatial object type RoadName

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.10. Road Node (RoadNode)

A point spatial object that is used to either represent connectivity between two road links or to represent a significant spatial object such as a services station or roundabout.

This type is a sub-type of TransportNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE ROADNODE

Attribute	Definition	Type	Voidability
formOfRoadNode	Description of the function of a road node in the road transport network.	FormOfRoadNodeValue	voidable

7.7.1.11. Road Service Area (RoadServiceArea)

Surface annexed to a road and devoted to offer particular services for it.

This type is a sub-type of TransportArea.

7.7.1.12. Road Service Type (RoadServiceType)

Description of the type of road service area and the available facilities.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RoadServiceType

Attribute	Definition	Type	Voidability
availableFacility	Facility that is available for a given road service area.	ServiceFacilityValue	
type	Type of road service area.	RoadServiceTypeValue	

Constraints of the spatial object type RoadServiceType

This property can only be associated with a spatial object of the type RoadServiceArea or RoadNode (when formOfRoadNode=roadServiceArea).

7.7.1.13. Road Surface Category (RoadSurfaceCategory)

Specification of the state of the surface of the associated Road Element. Indicates whether a road is paved or unpaved.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RoadSurfaceCategory

Attribute	Definition	Type	Voidability
surfaceCategory	Type of road surface.	RoadSurfaceCategoryValue	

Constraints of the spatial object type RoadSurfaceCategory

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.14. Road Width (RoadWidth)

The width of the road, measured as an average value.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type RoadWidth

Attribute	Definition	Type	Voidability
measuredRoadPart	Indicates to which part of a road the value for the attribute 'width' applies.	RoadPartValue	voidable
width	Road width value.	Measure	

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Constraints of the spatial object type RoadWidth

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.15. Speed Limit (SpeedLimit)

Limit for the speed of a vehicle on a road.

This type is a sub-type of TransportProperty.

Attributes of the spatial object type SpeedLimit

Attribute	Definition	Type	Voidability
areaCondition	Speed limit is dependent on environmental circumstances.	AreaConditionValue	voidable
direction	Indicates which direction the speed limit is valid for.	LinkDirectionValue	voidable
laneExtension	Number of lanes (including the start lane) to which the speed limit applies.	Integer	voidable
speedLimitMinMaxType	Indicates if the speed limit is maximum or minimum and if it is recommended.	SpeedLimitMinMaxValue	
speedLimitSource	Source for speed limit.	SpeedLimitSourceValue	voidable
speedLimitValue	Value for speed limit.	Velocity	
startLane	Index of the first lane to which speed limit applies. For countries with right-hand traffic, the index 1 refers to the rightmost lane and the index is incremented to the left; for countries with left-hand traffic, the index 1 refers to the leftmost lane, and the index is incremented to the right.	Integer	voidable
validityPeriod	Period during which the speed limit is valid.	TM_Period	voidable

vehicleType	Vehicle type the speed limit is restricted to.	VehicleTypeValue	voidable
weatherCondition	Weather condition the speed limit is dependent on.	WeatherConditionValue	voidable

Constraints of the spatial object type SpeedLimit

This property can only be associated with a spatial object that is part of a road transport network.

7.7.1.16. Vehicle Traffic Area (VehicleTrafficArea)

Surface that represents the part of a road which is used for the normal traffic of vehicles.

This type is a sub-type of TransportArea.

7.7.2. *Enumerations*

7.7.2.1. Functional Road Class (FunctionalRoadClassValue)

Values for the functional road classification. This classification is based on the importance of the role that the road performs in the road network.

ALLOWED VALUES FOR THE ENUMERATION FUNCTIONALROADCLASSVALUE

Value	Definition
mainRoad	The most important roads in a given network.
firstClass	The second most important roads in a given network.
secondClass	The third most important roads in a given network.
thirdClass	The fourth most important roads in a given network.
fourthClass	The fifth most important roads in a given network.
fifthClass	The sixth most important roads in a given network.
sixthClass	The seventh most important roads in a given network.
seventhClass	The eighth most important roads in a given network.
eighthClass	The ninth most important roads in a given network.
ninthClass	The least important roads in a given network.

7.7.2.2. Minimum Or Maximum Lane Number (MinMaxLaneValue)

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Values to indicate whether number of lanes are counted as the maximum, minimum or average number.

ALLOWED VALUES FOR THE ENUMERATION MINMAXLANEVALUE

Value	Definition
maximum	The number of lanes is the maximum value for a given part of the road network.
minimum	The number of lanes is the minimum value for a given part of the road network.
average	The number of lanes is the average value for a given part of the road network.

7.7.2.3. Nature Of Speed Limit (SpeedLimitMinMaxValue)

Possible values to indicate the nature of a speed limit.

ALLOWED VALUES FOR THE ENUMERATION SPEEDLIMITMINMAXVALUE

Value	Definition
maximum	Speed limit is a maximum value
minimum	Speed limit is a minimum value
recommendedMaximum	Speed limit is a recommended maximum value
recommendedMinimum	Speed limit is a recommended minimum value

7.7.3.   *Code Lists*

7.7.3.1. Area Condition (AreaConditionValue)

Speed limit restriction depending on the area.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] AREACONDITIONVALUE

Value	Definition
inNationalPark	Speed limit restriction inside national park.
insideCities	Speed limit restriction inside cities.
nearRailroadCrossing	Speed limit restriction near rail road crossing.
nearSchool	Speed limit restriction near school.
outsideCities	Speed limit restriction outside cities.
trafficCalmingArea	Speed limit restriction in traffic calming area.]

7.7.3.2.   Form Of Road Node (FormOfRoadNodeValue)

Functions of road nodes.

[^{F1}The allowed values for this code list comprise only the values in the table below.]

[^{F4}[^{F1}VALUES FOR THE CODE LIST] FORMOFROADNODEVALUE

Value	Definition
enclosedTrafficArea	The road node is situated inside and/or represents an enclosed traffic area. A traffic area is an area with no internal structure of legally defined driving directions. At least two roads are connected to the area.
junction	Road node where three or more road links connect.
levelCrossing	A road node where the road network is a crossed by a railway at the same level.
pseudoNode	Exactly two road links connect to the road node.
roadEnd	Only one road link connects to the road node. It signifies the end of a road.
roadServiceArea	Surface annexed to a road and devoted to offer particular services for it.
roundabout	The road node represents or is a part of a roundabout. A roundabout is a road which forms a ring on which traffic travelling in only one direction is allowed.
trafficSquare	The road node is situated inside and/or represents a traffic square. A traffic square is an area (partly) enclosed by roads which is used for non-traffic purposes and which is not a roundabout.]

7.7.3.3.   Form Of Way (FormOfWayValue)

Classification based on the physical properties of the road link.

[^{F1}The allowed values for this code list comprise only the values in the table below.]

[^{F4}[^{F1}VALUES FOR THE CODE LIST] FORMOFWAYVALUE

Value	Definition
bicycleRoad	Road where bicycles are the only vehicles allowed.

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dualCarriageway	Road with physically separated carriageways regardless of the number of lanes, which is not a motorway or a freeway.
enclosedTrafficArea	Area with no internal structure of legally defined driving directions. At least two roads are connected to the area.
entranceOrExitCarPark	Road specially designed to enter or to leave a parking area.
entranceOrExitService	Road used only to enter or to leave a service.
freeway	Road having no single level crossings with other roads.
motorway	Road to which regulations will normally apply with regards to entry and use. It has two or more mostly physically separated carriageways and no single level-crossings.
pedestrianZone	Area with a road network which is especially designed for use by pedestrians.
roundabout	Road which forms a ring on which traffic travelling in only one direction is allowed.
serviceRoad	Road running parallel to, and designed to connect, a road with a relatively high connectivity function with roads with a lower connectivity function.
singleCarriageway	Road where the traffic is not separated by any physical object.
slipRoad	Road especially designed to enter or exit another road.
tractorRoad	Arranged road only usable for a tractor (farm vehicle or forest machine) or terrain vehicle (a vehicle with higher ground clearance, big wheels and 4 wheel drive).
trafficSquare	Area (partly) enclosed by roads which is used for non-traffic purposes and which is not a roundabout.
walkway	Road reserved for pedestrian use and closed for regular vehicular use by a physically barrier.**]**

7.7.3.4. Road Part (RoadPartValue)

Indication to which part of a road the value of a measurement applies.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST] ROADPARTVALUE

Value	Definition
carriageway	The part of a road which is reserved for traffic.
pavedSurface	The part of the road which is paved.]

7.7.3.5.   Road Service Type (RoadServiceTypeValue)

Types of road service areas.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] ROADSERVICETYPEVALUE

Value	Definition
busStation	The road service is a bus stop.
parking	The road service area is a parking facility.
restArea	The road service is a rest area.
toll	Area that provides toll services such as ticket dispensers or toll payment services.]

7.7.3.6.   Road Surface Category (RoadSurfaceCategoryValue)

Values to indicate whether a road is paved or not paved.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] ROADSURFACECATEGORYVALUE

Value	Definition
paved	Road with a hard paved surface.
unpaved	Road not paved.]

7.7.3.7.   Service Facility (ServiceFacilityValue)

Possible service facilities available at a road service area.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] SERVICEFACILITYVALUE

Value	Definition
drinks	Drinks are available.
food	Food is available.

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fuel	Fuel is available.
picnicArea	A picnic area is present.
playground	A playground area is present.
shop	A shop is present.
toilets	Toilets are present.**]**

7.7.3.8.   Speed Limit Source (SpeedLimitSourceValue)

Possible sources for speed limits.

[F1 The allowed values for this code list comprise only the values in the table below.**]**

[F4[F1VALUES FOR THE CODE LIST**]** SPEEDLIMITSOURCEVALUE

Value	Definition
fixedTrafficSign	Source is a fixed traffic sign (site specific administrative order, explicit speed limit).
regulation	Source is a regulation (national regulation, rule or 'implicit speed limit').
variableTrafficSign	Source is a variable traffic sign.**]**

7.7.3.9.   Vehicle Type (VehicleTypeValue)

Possible types of vehicles.

[F1 The allowed values for this code list comprise only the values in the table below.**]**

[F4[F1VALUES FOR THE CODE LIST**]** VEHICLETYPEVALUE

Value	Definition
allVehicle	Any vehicle, not including pedestrians.
bicycle	A pedal-driven two-wheeled vehicle.
carWithTrailer	A passenger car with an attached trailer.
deliveryTruck	A truck vehicle of relatively small size, whose principal use is for delivery of goods and materials.
emergencyVehicle	A vehicle engaged in emergency response, including but not limited to police, ambulance and fire.
employeeVehicle	A vehicle operated by an employee of an organization that is used according to that organization's procedures.
facilityVehicle	A vehicle dedicated to a localized area within a private or restricted estate.

farmVehicle	Vehicle commonly associated with farming activities.
highOccupancyVehicle	Vehicle populated with a number of occupants corresponding to (or exceeding) the specified minimum number of passengers.
lightRail	Train-like transport vehicle limited to a rail network within a limited area.
mailVehicle	A vehicle that collects, carries or delivers mail.
militaryVehicle	Vehicle authorized by a military authority.
moped	Two or three wheeled vehicle equipped with internal combustion engine, with size less than 50 cc and maximum speed that does not exceed 45 km/h (28mph).
motorcycle	Two or three wheeled vehicle equipped with internal combustion engine, with size more than 50 cc and maximum speed that does exceed 45 km/h (28mph).
passengerCar	A small vehicle designed for private transport of people.
pedestrian	A person on foot.
privateBus	A vehicle designed for transport of large groups of people, privately owned or chartered.
publicBus	A vehicle designed for transport of large groups of people that is generally characterised by published routes and schedules.
residentialVehicle	A vehicle whose owner is resident (or a guest) of particular street or town area.
schoolBus	Vehicle operated on behalf of a school to transport students.
snowChainEquippedVehicle	Any vehicle equipped with snow chains.
tanker	A truck with more than two axles used to transport liquid or gas loads in bulk.
taxi	A vehicle licensed for hire usually fitted with a meter.
transportTruck	A truck vehicle for long range transport of goods.
trolleyBus	A bus-like mass transport vehicle hooked up to an electrical network for power supply.

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vehicleForDisabledPerson	A vehicle with supporting identification that designates a vehicle for disabled persons.
vehicleWithExplosiveLoad	Vehicle transporting explosive cargo.
vehicleWithOtherDangerousLoad	Vehicle transporting dangerous cargo other than explosive or water-polluting loads.
vehicleWithWaterPollutingLoad	Vehicle transporting water-polluting cargo.**]**

7.7.3.10. Weather Condition (WeatherConditionValue)

Values to indicate weather conditions that affect speed limits.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** WEATHERCONDITIONVALUE

Value	Definition
fog	Speed applies when fog is present.
ice	Speed applies when ice is present.
rain	Speed applies when rain is present.
smog	Speed applies when a certain amount of smog is present.
snow	Speed applies when snow is present.**]**

7.8.   **Water Transport Network**

7.8.1.   *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Water Transport Network:
—   Beacon
—   Buoy
—   CEMT Class
—   Condition of Water Facility
—   Fairway Area
—   Ferry Crossing
—   Ferry Use
—   Inland Waterway
—   Marine Waterway
—   Port Area
—   Port Node
—   Restriction for Water Vehicles
—   Traffic Separation Scheme
—   Traffic Separation Scheme Area
—   Traffic Separation Scheme Crossing
—   Traffic Separation Scheme Lane

—   Traffic Separation Scheme Roundabout
—   Traffic Separation Scheme Separator
—   Water Link Sequence
—   Water Node
—   Water Traffic Flow Direction
—   Waterway
—   Waterway Link
—   Waterway Node

7.8.1.1.   Beacon (Beacon)

A prominent specially constructed object forming a conspicuous mark as a fixed aid to navigation, or for use in hydrographic survey.

This type is a sub-type of TransportPoint.

7.8.1.2.   Buoy (Buoy)

A floating object moored to the bottom in a particular (charted) place, as an aid to navigation or for other specific purposes.

This type is a sub-type of TransportPoint.

7.8.1.3.   CEMT Class (CEMTClass)

Classification of an inland waterway according to CEMT (European Conference of Ministers of Transport).

This type is a sub-type of TransportProperty.

Attributes of the spatial object type CEMTClass

Attribute	Definition	Type	Voidability
CEMTClass	Value indicating the classification of an Inland waterway according to CEMT (European Conference of Ministers of Transport).	CEMTClassValue	

Constraints of the spatial object type CEMTClass

This property can only be associated with a spatial object that is part of a water transport network.

7.8.1.4.   Condition Of Water Facility (ConditionOfWaterFacility)

State of a water transport network element with regards to its completion and use.

This type is a sub-type of ConditionOfFacility.

Constraints of the spatial object type ConditionOfWaterFacility

This property can only be associated with a spatial object that is part of a water transport network.

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7.8.1.5. Fairway Area (FairwayArea)

The main travelled part of a waterway.

This type is a sub-type of TransportArea.

7.8.1.6. Ferry Crossing (FerryCrossing)

A special waterway aimed at supporting the transport of passengers, vehicles or other cargo/ freight across a water body, and which is normally used as a connection linking two or more nodes of a land based transport network.

This type is a sub-type of Waterway.

7.8.1.7. Ferry Use (FerryUse)

The type of transport carried out by a ferry crossing.

This type is a sub-type of TransportProperty.
Attributes of the spatial object type FerryUse

Attribute	Definition	Type	Voidability
ferryUse	Value indicating the type of transport carried out by a ferry crossing.	FerryUseValue	

Constraints of the spatial object type FerryUse

This property can only be associated with a spatial object that is part of a water transport network.

7.8.1.8. Inland Waterway (InlandWaterway)

Waterway which is defined at inland continental waters.

This type is a sub-type of Waterway.

7.8.1.9. Marine Waterway (MarineWaterway)

Waterway which is defined at sea waters.

This type is a sub-type of Waterway.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE MARINEWATERWAY

Attribute	Definition	Type	Voidability
deepWaterRoute	Attribute which indicates if the maritime waterway is a deep water route.	Boolean	voidable

7.8.1.10. Port Area (PortArea)

An area spatial object which is used to represent the physical limits of all the facilities which constitute the terrestrial zone of a sea or inland port.

This type is a sub-type of TransportArea.

7.8.1.11. Port Node (PortNode)

A point spatial object which is used to represent a sea or inland port in a simplified way, aproximately located at the bank of the waterbody where the port is placed.

This type is a sub-type of WaterNode.

7.8.1.12. Restriction For Water Vehicles (RestrictionForWaterVehicles)

Restriction on vehicles on a water transport element.

This type is a sub-type of RestrictionForVehicles.
Constraints of the spatial object type RestrictionForWaterVehicles

This property can only be associated with a spatial object that is part of a water transport network.

7.8.1.13. Traffic Separation Scheme (TrafficSeparationScheme)

A scheme which aims at reducing the risk of collision in congested and/or converging areas by separating traffic moving in opposite, or nearly opposite, directions.

This type is abstract.

ASSOCIATION ROLES OF THE SPATIAL
OBJECT TYPE TRAFFICSEPARATIONSCHEME

Association role	Definition	Type	Voidability
component	A component of a traffic separation scheme.	TrafficSeparationSchemeArea	
marineWaterRoute	The collection of marine waterways associated with a traffic separation scheme.	MarineWaterway	
markerBeacon	A marker forming part of a traffic separation scheme.	Beacon	
markerBuoy	A marker forming part of a traffic separation scheme.	Buoy	

7.8.1.14. Traffic Separation Scheme Area (TrafficSeparationSchemeArea)

An area spatial object forming part of a traffic separation scheme.

This type is a sub-type of TransportArea.

This type is abstract.

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7.8.1.15. Traffic Separation Scheme Crossing (TrafficSeparationSchemeCrossing)

A defined area where traffic lanes cross.

This type is a sub-type of TrafficSeparationSchemeArea.

7.8.1.16. Traffic Separation Scheme Lane (TrafficSeparationSchemeLane)

An area within defined limits in which one-way traffic flow is established.

This type is a sub-type of TrafficSeparationSchemeArea.

7.8.1.17. Traffic Separation Scheme Roundabout (TrafficSeparationSchemeRoundabout)

A traffic separation scheme in which traffic moves in a counter-clockwise direction around a specified point or zone.

This type is a sub-type of TrafficSeparationSchemeArea.

7.8.1.18. Traffic Separation Scheme Separator (TrafficSeparationSchemeSeparator)

A zone separating the lanes in which ships are proceeding in opposite or nearly opposite directions; or separating traffic lanes designated for particular classes of ships proceeding in the same direction.

This type is a sub-type of TrafficSeparationSchemeArea.

7.8.1.19. Water Link Sequence (WaterLinkSequence)

A linear spatial object, composed of an ordered collection of waterway and/or watercourse links (as necessary), which represents a continuous path in the water network without any branches.

This type is a sub-type of TransportLinkSequence.

7.8.1.20. Water Node (WaterNode)

A point spatial object which is used to represent the connectivity between two different waterway links, or between a waterway link and a watercourse link, in the water transport network.

This type is a sub-type of TransportNode.

This type is abstract.

7.8.1.21. Water Traffic Flow Direction (WaterTrafficFlowDirection)

Indicates the direction of the flow of water transport traffic in relation to the direction of the water transport link vector.

This type is a sub-type of TrafficFlowDirection.
Constraints of the spatial object type WaterTrafficFlowDirection

This property can only be associated with a spatial object that is part of a water transport network.

7.8.1.22. Waterway (Waterway)

A collection of water link sequences and or individual waterway and/or watercourse links (as necessary) that are characterized by one or more thematical identifiers and/or properties, which perform a navigable route within a water body (oceans, seas, rivers, lakes, channels or canals).

This type is a sub-type of TransportLinkSet.

This type is abstract.

7.8.1.23.　Waterway Link (WaterwayLink)

A linear spatial object that describes the geometry or connectivity of the water transport network between two consecutive waterway or watercourse nodes. It represents a linear section across a body of water which is used for shipping.

This type is a sub-type of TransportLink.

7.8.1.24.　Waterway Node (WaterwayNode)

A point spatial object which is used to represent the connectivity between two different waterway links, or between a waterway link and a watercourse link, in the water transport network.

This type is a sub-type of WaterNode.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE WATERWAYNODE

Attribute	Definition	Type	Voidability
formOfWaterwayNode	Description of the function of a waterway node in the water transport network.	FormOfWaterwayNodeValue	Voidable

7.8.2.　*Enumerations*

7.8.2.1.　CEMT Class (CEMTClassValue)

Inland waterway classification according to CEMT (European Conference of Ministers of Transport) Resolution No 92/2.

ALLOWED VALUES FOR THE ENUMERATION CEMTCLASSVALUE

Value	Definition
I	Inland waterway belonging to CEMT-class I, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
II	Inland waterway belonging to CEMT-class II, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
III	Inland waterway belonging to CEMT-class III, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.

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IV	Inland waterway belonging to CEMT-class IV, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
Va	Inland waterway belonging to CEMT-class Va, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
Vb	Inland waterway belonging to CEMT-class Vb, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
VIa	Inland waterway belonging to CEMT-class VIa, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
VIb	Inland waterway belonging to CEMT-class VIb, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
VIc	Inland waterway belonging to CEMT-class VIc, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.
VII	Inland waterway belonging to CEMT-class VII, defined by the European Conference of Ministers of Transport, Resolution No 92/2 - Table 1.

7.8.3.   *Code Lists*

7.8.3.1. Ferry Use (FerryUseValue)

Types of transport carried out by a ferry.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** FERRYUSEVALUE

Value	Definition
cars	Ferry carries cars.
other	Ferry carries others forms of transport than passengers, cars, trucks or trains.
passengers	Ferry carries passengers.
train	Ferry carries trains.
trucks	Ferry carries trucks.**]**

7.8.3.2.   Form Of Waterway Node (FormOfWaterwayNodeValue)

Function of a Waterway Node in the water transport network.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** FORMOFWATERWAYNODEVALUE

Value	Definition
junctionFork	Infrastructure elements where one vessel traffic flow crosses another vessel traffic flow or points where vessel traffic flows divide or come together.
lockComplex	Lock or group of locks, intended for raising and lowering boats between stretches of water of different levels on river and canal waterways.
movableBridge	Bridge that can be raised or turned to allow the passage of ships.
shipLift	A machine for transporting boats between water bodies at two different elevations, which is used as an alternative to the canal locks.
waterTerminal	The location where goods are transhipped.
turningBasin	A place where a canal or narrow waterway is widened to allow boats to turn around.**]**

7.9.   **Theme-specific Requirements**

7.9.1.   *Consistency between spatial data sets*

1.   Transport Networks centreline representations and nodes shall always be located within the extent of the area representation of the same object.

2.   Connectivity between Transport Networks across state borders and – where applicable – also across regional borders (and data sets) within Member States shall be established and maintained by the respective authorities, using the cross-border connectivity mechanisms provided by the NetworkConnection type.

7.9.2.   *Modelling of object references*

1.   When linear referencing is used in Transport Networks data, the position of referenced properties on links and link sequences shall be expressed as distances measured along the supplied geometry of the underlying link object(s).

2.   An inter-modal connection shall always reference two elements which belong to different networks.

7.9.3.   *Geometry representation*

1.   Transport link ends shall be connected wherever an intersection exists between the real world phenomena they represent. No connections shall be created at crossing network elements when it is not possible to pass from one element to another.

2.   In a Transport Networks data set which contains nodes, these nodes shall only be present where Transport Links connect or end.

7.9.4. *Modelling of object references*

The Water transport networks shall re-use, where it exists and is practicable, the water network centreline geometry of the Hydrography theme. Therefore, object referencing shall be used to link the water transport course with the existing water network geometry in the Hydrography theme.

7.9.5. *Centrelines*

The centrelines of Road and Rail objects shall fall within the extent of the physical real world object that they represent if the Link is indicated as not being 'fictitious'.

7.9.6. *Ensuring Network Connectivity*

1.   Wherever a connection exists in a transport network, all connected link ends and the optional node that take part in this connection have to be positioned at a distance of less than the connectivity tolerance from each other.

2.   Link ends and nodes that are not connected shall always be separated by a distance that is greater than the connectivity tolerance.

3.   In data sets where both transport links and nodes are present, the relative position of nodes and link ends in relation to the specified connectivity tolerance shall correspond to the associations that exist between them in the data set.

7.10. **Layers**

LAYERS FOR THE SPATIAL DATA THEME TRANSPORT NETWORKS

Layer Type	Layer Title	Spatial object type(s)
TN.CommonTransportElements.TransportNode	Generic Transport Node	TransportNode
TN.CommonTransportElements.TransportLink	Generic Transport Link	TransportLink
TN.CommonTransportElements.TransportArea	Generic Transport Area	TransportArea
TN.RoadTransportNetwork.RoadLink	Road Link	RoadLink
TN.RoadTransportNetwork.VehicleTrafficArea	Vehicle Traffic Area	VehicleTrafficArea
TN.RoadTransportNetwork.RoadServiceArea	Road Service Area	RoadServiceArea
TN.RoadTransportNetwork.RoadArea	Road Area	RoadArea
TN.RailTransportNetwork.RailwayLink	Railway Link	RailwayLink
TN.RailTransportNetwork.RailwayStationArea	Railway Station Area	RailwayStationArea
TN.RailTransportNetwork.RailwayYardArea	Railway Yard Area	RailwayYardArea
TN.RailTransportNetwork.RailwayArea	Railway Area	RailwayArea
TN.WaterTransportNetwork.WaterwayLink	Waterway Link	WaterwayLink

TN.WaterTransportNetwork.FairwayArea	FairwayArea	FairwayArea
TN.WaterTransportNetwork.PortArea	PortArea	PortArea
TN.AirTransportNetwork.AirLink	Air Link	AirLink
TN.AirTransportNetwork.AerodromeArea	Aerodrome Area	AerodromeArea
TN.AirTransportNetwork.RunwayArea	Runway Area	RunwayArea
TN.AirTransportNetwork.AirspaceArea	Airspace Area	AirspaceArea
TN.AirTransportNetwork.ApronArea	Apron Area	ApronArea
TN.AirTransportNetwork.TaxiwayArea	Taxiway Area	TaxiwayArea
TN.CableTransportNetwork.CablewayLink	Cableway link	CablewayLink

8.   HYDROGRAPHY

8.1.   **Definitions**

In addition to the definitions set out in Article 2, the following definitions shall apply:

— 'aquifer' means a subsurface layer or layers of rock or other geological strata of sufficient porosity and permeability to allow either a significant flow of groundwater or the abstraction of significant quantities of groundwater,

— 'groundwater' means all water which is below the surface of the ground in the saturation zone and in direct contact with the ground or subsoil,

— 'sub-basin' means an area of land from which all surface run-off flows through a series of streams, rivers and, possibly, lakes to a particular point in a water course,

8.2.   **Structure of the Spatial Data Theme Hydrography**

The types specified for the spatial data theme Hydrography are structured in the following packages:

— Hydro - base
— Hydro - Network
— Hydro - Physical Waters

8.3.   **Hydro - base**

8.3.1.   *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Hydro - base:

— Hydro Object

8.3.1.1.   Hydro Object (HydroObject)

An identity base for hydrographic (including man-made) objects in the real world.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE HYDROOBJECT

Attribute	Definition	Type	Voidability

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geographicalName	A geographical name that is used to identify a hydrographic object in the real world. It provides a 'key' for implicitly associating different representations of the object.	GeographicalName	voidable
hydroId	An identifier that is used to identify a hydrographic object in the real world. It provides a 'key' for implicitly associating different representations of the object.	HydroIdentifier	

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE HYDROOBJECT

Association role	Definition	Type	Voidability
relatedHydroObject	A related hydrographic object representing the same real-world entity.	HydroObject	voidable

8.3.2.   *Data Types*

8.3.2.1. Hydro Identifier (HydroIdentifier)

A hydrographic thematic identifier.

ATTRIBUTES OF THE DATA TYPE HYDROIDENTIFIER

Attribute	Definition	Type	Voidability
classificationScheme	A description of the identification scheme (National, European, etc.) being used.	CharacterString	
localId	A local identifier, assigned by some authority.	CharacterString	
Namespace	An indicator of the scope for the local identifier.	CharacterString	

8.4.   **Hydro - Network**

8.4.1.   *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Hydro - Network:

—   Hydro Node
—   Watercourse Link
—   Watercourse Link Sequence
—   Watercourse Separated Crossing

8.4.1.1.   Hydro Node (HydroNode)

A node within the hydrographic network.

This type is a sub-type of Node.

This type is a sub-type of HydroObject.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE HYDRONODE

Attribute	Definition	Type	Voidability
hydroNodeCategory	Nature of the hydro node.	HydroNodeCategoryValue	voidable

8.4.1.2.   Watercourse Link (WatercourseLink)

A segment of a watercourse within a hydrographic network.

This type is a sub-type of Link.

This type is a sub-type of HydroObject.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE WATERCOURSELINK

Attribute	Definition	Type	Voidability
flowDirection	Direction of water flow in the segment relative to digitisation of segment geometry.	LinkDirectionValue	voidable
length	Length of network segment.	Length	voidable

8.4.1.3.   Watercourse Link Sequence (WatercourseLinkSequence)

A sequence of watercourse links representing a non-branching path through a hydrographic network.

This type is a sub-type of LinkSequence.

This type is a sub-type of HydroObject.

8.4.1.4.   Watercourse Separated Crossing (WatercourseSeparatedCrossing)

An element in the hydrographic network used to indicate non-interacting crossing of watercourse links separated by level.

This type is a sub-type of GradeSeparatedCrossing.

This type is a sub-type of HydroObject.

8.4.2. *Code Lists*

8.4.2.1. Hydro Node Category (HydroNodeCategoryValue)

Defines categories for different types of hydrographic network nodes.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] HYDRONODECATEGORYVALUE

Value	Definition
boundary	Node used to connect different networks.
flowConstriction	A network node unrelated to the network topology per se, but associated with a hydrographic point of interest or facility, or a man-made object, that affects the network flow.
flowRegulation	A network node unrelated to the network topology per se, but associated with a hydrographic point of interest or facility, or a man-made object, that regulates the network flow.
junction	Node where three or more links connect.
outlet	Ending node of a series of interconnected links.
source	Starting node of a series of interconnected links.]

8.5. **Hydro - Physical Waters**

8.5.1. *Spatial Object Types*

The following spatial object types shall be used for the exchange and classification of spatial objects related to Hydro - Physical Waters:
—   Crossing
—   Dam or Weir
—   Drainage Basin
—   Embankment
—   Falls
—   Fluvial Point
—   Ford
—   Hydro Point of Interest
—   Land-Water Boundary

— Lock
— Man-made Object
— Rapids
— River Basin
— Shore
— Shoreline Construction
— Sluice
— Standing Water
— Surface Water
— Watercourse
— Wetland

8.5.1.1. Crossing (Crossing)

A man-made object allowing the passage of water above or below an obstacle.

This type is a sub-type of ManMadeObject.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE CROSSING

Attribute	Definition	Type	Voidability
type	The type of physical crossing.	CrossingTypeValue	voidable

8.5.1.2. Dam Or Weir (DamOrWeir)

A permanent barrier across a watercourse used to impound water or to control its flow.

This type is a sub-type of ManMadeObject.

8.5.1.3. Drainage Basin (DrainageBasin)

Area having a common outlet for its surface runoff.

This type is a sub-type of HydroObject.
Attributes of the spatial object type DrainageBasin

Attribute	Definition	Type	Voidability
area	Size of the drainage basin area.	Area	voidable
basinOrder	Number (or code) expressing the degree of branching/dividing in a drainage basin system.	HydroOrderCode	voidable
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable

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endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	The geometry of the drainage basin, as a surface.	GM_Surface	
inspireId	External object identifier of the spatial object.	Identifier	
origin	Origin of the drainage basin.	OriginValue	voidable

Association roles of the spatial object type DrainageBasin

Association role	Definition	Type	Voidability
outlet	The surface water outlet(s) of a drainage basin.	SurfaceWater	voidable
containsBasin	A smaller sub-basin contained within a larger basin	DrainageBasin	voidable

Constraints of the spatial object type DrainageBasin

A river basin may not be contained in any other basin

8.5.1.4.   Embankment (Embankment)

A man-made raised long mound of earth or other material.

This type is a sub-type of ManMadeObject.

[**F3**. . . . .]

8.5.1.5.   Falls (Falls)

A vertically descending part of a watercourse where it falls from a height.

This type is a sub-type of FluvialPoint.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE FALLS

Attribute	Definition	Type	Voidability
height	Distance measured from the lowest point of the base at ground or water level (downhill side/ downstream side) to	Length	voidable

	the tallest point of the spatial object.		

8.5.1.6. Fluvial Point (FluvialPoint)

A hydro point of interest that affects the flow of a watercourse.

This type is a sub-type of HydroPointOfInterest.

This type is abstract.

8.5.1.7. Ford (Ford)

A shallow part of a watercourse used as a road crossing.

This type is a sub-type of ManMadeObject.

8.5.1.8. Hydro Point Of Interest (HydroPointOfInterest)

A natural place where water appears, disappears or changes its flow.

This type is a sub-type of HydroObject.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE HYDROPOINTOFINTEREST

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	The geometry of the hydro point of interest, as a point, curve or surface.	GM_Primitive	voidable
inspireId	External object identifier of the spatial object.	Identifier	
levelOfDetail	Resolution, expressed as the inverse of an indicative scale or a ground distance.	MD_Resolution	

F38.5.1.9. Hydro Power Plant (HydroPowerPlant)

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F38.5.1.10.Inundated Land (InundatedLand)

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8.5.1.11. Land-Water Boundary (LandWaterBoundary)

The line where a land mass is in contact with a body of water.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE LANDWATERBOUNDARY

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	The geometry of the land-water boundary, as a curve.	GM_Curve	
inspireId	External object identifier of the spatial object.	Identifier	
origin	Origin of the land-water boundary.	OriginValue	voidable
waterLevelCategory	Water-level defining the land-water boundary.	WaterLevelValue	voidable

8.5.1.12. Lock (Lock)

An enclosure with a pair or series of gates used for raising or lowering vessels as they pass from one water level to another.

This type is a sub-type of ManMadeObject.

8.5.1.13. Man-made Object (ManMadeObject)

An artificial object which lies inside a body of water and has one of the following types of function: - Retains the water; - Regulates the quantity of water; - Alters the course of the water; - Allows watercourses to cross each other.

This type is a sub-type of HydroObject.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE MANMADEOBJECT

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
condition	The state of planning, construction, repair, and/or maintenance of the structures and/or equipment comprising a facility and/or located at a site, as a whole.	ConditionOfFacilityValue	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	The geometry of the man-made object, as a point, curve or surface.	GM_Primitive	voidable
inspireId	External object identifier of the spatial object.	Identifier	
levelOfDetail	Resolution, expressed as the inverse of an indicative scale or a ground distance.	MD_Resolution	

[F3]8.5.1.14. Ocean Region (OceanRegion)

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[F3]8.5.1.15. Pipe (Pipe)

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[F3]8.5.1.16. Pumping Station (PumpingStation)

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8.5.1.17. Rapids (Rapids)

Portions of a stream with accelerated current where it descends rapidly but without a break in the slope of the bed sufficient to form a waterfall.

This type is a sub-type of FluvialPoint.

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8.5.1.18. River Basin (RiverBasin)

The area of land from which all surface run-off flows through a sequence of streams, rivers and, possibly, lakes into the sea at a single river mouth, estuary or delta.

This type is a sub-type of DrainageBasin.

8.5.1.19. Shore (Shore)

The narrow strip of land in immediate contact with any body of water including the area between high and low water lines.

This type is a sub-type of HydroObject.

[**F3**. . . . .]

ATTRIBUTES OF THE SPATIAL OBJECT TYPE SHORE

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
composition	The primary type(s) of material composing a spatial object, exclusive of the surface.	ShoreTypeValue	voidable
delineationKnown	An indication that the delineation (for example: limits and information) of a spatial object is known.	Boolean	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
[**F1**geometry	The geometry of the shore.	GM_MultiSurface	]
inspireId	External object identifier of the spatial object.	Identifier	

8.5.1.20. Shoreline Construction (ShorelineConstruction)

An artificial structure attached to land bordering a body of water and fixed in position.

This type is a sub-type of ManMadeObject.

8.5.1.21. Sluice (Sluice)

An open, inclined conduit fitted with a gate for regulating water flow.

This type is a sub-type of ManMadeObject.

8.5.1.22. Standing Water (StandingWater)

A body of water that is entirely surrounded by land.

This type is a sub-type of SurfaceWater.

Attributes of the spatial object type StandingWater

Attribute	Definition	Type	Voidability
elevation	Elevation above mean sea level.	Length	voidable
meanDepth	Average depth of the body of water.	Length	voidable
surfaceArea	Surface area of the body of water.	Area	voidable

Constraints of the spatial object type StandingWater

Standing water geometry may be a surface or point

8.5.1.23. Surface Water (SurfaceWater)

Any known inland waterway body.

This type is a sub-type of HydroObject.

This type is abstract.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE SURFACEWATER

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable
geometry	The geometry of the surface water: - either a curve or surface for a watercourse; - either a point or	GM_Primitive	

	surface for a standing water.		
inspireId	External object identifier of the spatial object.	Identifier	
levelOfDetail	Resolution, expressed as the inverse of an indicative scale or a ground distance.	MD_Resolution	
localType	Provides 'local' name for the type of surface water.	LocalisedCharacterString	voidable
origin	Origin of the surface water.	OriginValue	voidable
persistence	The degree of persistence of water.	HydrologicalPersistenceValue	voidable
tidal	Identifies whether the surface water is affected by tidal water.	Boolean	voidable

ASSOCIATION ROLES OF THE SPATIAL OBJECT TYPE SURFACEWATER

Association role	Definition	Type	Voidability
bank	The bank(s) associated to a surface water.	Shore	voidable
drainsBasin	The basin(s) drained by a surface water.	DrainageBasin	voidable
neighbour	An association to another instance of the same real-world surface water in another data set.	SurfaceWater	voidable

8.5.1.24. Watercourse (Watercourse)

A natural or man-made flowing watercourse or stream.

This type is a sub-type of SurfaceWater.
Attributes of the spatial object type Watercourse

Attribute	Definition	Type	Voidability
condition	The state of planning, construction, repair, and/or maintenance of a watercourse.	ConditionOfFacilityValue	voidable

delineationKnown	An indication that the delineation (for example: limits and information) of a spatial object is known.	Boolean	voidable
length	Length of the watercourse.	Length	voidable
level	Vertical location of watercourse relative to ground.	VerticalPositionValue	voidable
streamOrder	Number (or code) expressing the degree of branching in a stream system.	HydroOrderCode	voidable
width	Width of watercourse (as a range) along its length.	WidthRange	voidable

Constraints of the spatial object type Watercourse

[**F2**The shores on either side of a watercourse shall be provided (using the bank property) as two separate Shore objects.**]**

Watercourse geometry may be a curve or surface

A condition attribute may be specified only for a man-made watercourse

8.5.1.25. Wetland (Wetland)

A poorly drained or periodically flooded area where the soil is saturated with water, and vegetation is supported.

This type is a sub-type of HydroObject.

[**F3**. . . . .]

ATTRIBUTES OF THE SPATIAL OBJECT TYPE WETLAND

Attribute	Definition	Type	Voidability
beginLifespanVersion	Date and time at which this version of the spatial object was inserted or changed in the spatial data set.	DateTime	voidable
endLifespanVersion	Date and time at which this version of the spatial object was superseded or retired in the spatial data set.	DateTime	voidable

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geometry	The geometry of the wetland, as a surface.	GM_Surface	
inspireId	External object identifier of the spatial object.	Identifier	
localType	Provides 'local' name for the type of wetland.	LocalisedCharacterString	voidable
Tidal	Identifies whether the wetland is affected by tidal water.	Boolean	voidable

8.5.2. *Data Types*

8.5.2.1. Hydro Order Code (HydroOrderCode)

A hydrologically meaningful 'order code' for ordering hierarchies of watercourses and drainage basins.

ATTRIBUTES OF THE DATA TYPE HYDROORDERCODE

Attribute	Definition	Type	Voidability
order	Number (or code) expressing the degree of branching or dividing in a stream or drainage basin system.	CharacterString	
orderScheme	A description of the concept for ordering.	CharacterString	
scope	An indicator of the scope or origin for an order code (including whether it is national, supranational or European).	CharacterString	

8.5.2.2. Width Range (WidthRange)

The range of a watercourse's horizontal width along its length.

ATTRIBUTES OF THE DATA TYPE WIDTHRANGE

Attribute	Definition	Type	Voidability
lower	Lower bound of width.	Length	

upper	Upper bound of width.	Length	

8.5.3. *Enumerations*

8.5.3.1. Origin (OriginValue)

An enumeration type specifying a set of hydrographic 'origin' categories (natural, man-made) for various hydrographic objects.

ALLOWED VALUES FOR THE ENUMERATION ORIGINVALUE

Value	Definition
natural	An indication that a spatial object is natural.
manMade	An indication that a spatial object is man-made.

8.5.4. *Code Lists*

8.5.4.1. Crossing Type (CrossingTypeValue)

Man-made physical watercourse crossing types.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] CROSSINGTYPEVALUE

Value	Definition
aqueduct	A pipe or artificial channel that is designed to transport water from a remote source, usually by gravity, for freshwater supply, agricultural, and/or industrial use.
bridge	A structure that connects two locations and provides for the passage of a transportation route over a terrain obstacle.
culvert	An enclosed channel for carrying a watercourse under a route.
siphon	A pipe used for conveying liquid from one level to a lower level, using the liquid pressure differential to force a column of the liquid up to a higher level before it falls to the outlet.]

8.5.4.2. Hydrological Persistence (HydrologicalPersistenceValue)

Categories of hydrological persistence of a body of water.

[**F1**The allowed values for this code list comprise only the values in the table below.]

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[**F4**[**F1**VALUES FOR THE CODE LIST] HYDROLOGICALPERSISTENCEVALUE

Value	Definition
dry	Filled and/or flowing infrequently, generally only during and/or immediately after heavy precipitation.
ephemeral	Filled and/or flowing during and immediately after precipitation.
intermittent	Filled and/or flowing for part of the year.
perennial	Filled and/or flowing continuously throughout the year.]

F38.5.4.3. Inundation (InundationValue)

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8.5.4.4. Shore Type (ShoreTypeValue)

Categories of shore area composition.

[**F3**. . . . .]

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] SHORETYPEVALUE

Value	Definition
boulders	Large water- or weather-worn stones.
clay	A stiff tenacious fine-grained earth consisting mainly of hydrated aluminosilicates, which become more plastic when water is added and can be moulded and dried.
gravel	Small water-worn or pounded stones.
mud	Soft wet soil, sand, dust, and/or other earthy matter.
rock	Stones of any size.
sand	Granular material consisting of small eroded fragments of (mainly siliceous) rocks, finer than gravel and larger than a coarse silt grain.
shingle	Small, loose, rounded water-worn pebbles, especially as accumulated on a seashore.
stone	Pieces of rock or mineral substance (other than metal) of definite form and size, usually artificially shaped, and used for some special purpose.]

8.5.4.5. Water Level (WaterLevelValue)

The tidal datum / waterlevel to which depths and heights are referenced.

[^{F1}The allowed values for this code list comprise only the values in the table below.]

[^{F4}[^{F1}VALUES FOR THE CODE LIST] WATERLEVELVALUE

Value	Definition
equinoctialSpringLowWater	The level of low water springs near the time of an equinox.
higherHighWater	The highest of the high waters (or single high water) of any specified tidal day due to the declination A1 effects of the moon and sun.
higherHighWaterLargeTide	The average of the highest high waters, one from each of 19 years of observations.
highestAstronomicalTide	The highest tidal level, which can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.
highestHighWater	The highest water level observed at a location.
highWater	The highest level reached at a location by the water surface in one tidal cycle.
highWaterSprings	An arbitrary level, approximating that of mean high water springs.
indianSpringHighWater	A tidal surface datum approximating the level of the mean of the higher high water at spring tides.
indianSpringLowWater	A tidal surface datum approximating the level of the mean of the lower low water at spring tides.
localDatum	An arbitrary datum defined by an authority of a local harbour, from which levels and tidal heights are measured by that authority.
lowerLowWater	The lowest of the low waters (or single low water) of any specified tidal day due to the declination A1 effects of the moon and sun.
lowerLowWaterLargeTide	The average of the lowest low waters, one from each of 19 years of observations.
lowestAstronomicalTide	The lowest tide level that can be predicted to occur under average meteorological conditions and under any combination of astronomical conditions.

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lowestLowWater	An arbitrary level conforming to the lowest tide observed at a location, or somewhat lower.
lowestLowWaterSprings	An arbitrary level conforming to the lowest water level observed at a location at spring tides during a period shorter than 19 years.
lowWater	An approximation of mean low water adopted as the reference level for a limited region, irrespective of better determinations later.
lowWaterDatum	An approximation of mean low water that has been adopted as a standard reference for a limited area.
lowWaterSprings	A level approximating that of mean low water springs.
meanHigherHighWater	The average height of higher high waters at a location over a 19-year period.
meanHigherHighWaterSprings	The average height of higher high water at spring tides at a location.
meanHigherLowWater	The average of the higher low water height of each tidal day observed over a National Tidal Datum Epoch.
meanHighWater	The average height of all high waters at a location over a 19-year period.
meanHighWaterNeaps	The average height of the high waters of the neap tide.
meanHighWaterSprings	The average height of the high waters of spring tides.
meanLowerHighWater	The average of the lower high water height of each tidal day observed over a National Tidal Datum Epoch.
meanLowerLowWater	The average height of the lower low waters at a location over a 19-year period.
meanLowerLowWaterSprings	The average height of lower low water at spring tides at a location.
meanLowWater	The average height of all low waters at a location over a 19-year period.
meanLowWaterNeaps	The average height of the low waters of the neap tide.
meanLowWaterSprings	The average height of the low waters of spring tides.

meanSeaLevel	The average height of the sea at a tide station measured from a fixed predetermined reference level.
meanTideLevel	The arithmetic mean of mean high water and mean low water.
meanWaterLevel	The average of all hourly water levels over the available period of record.
nearlyHighestHighWater	An arbitrary level approximating the highest water level observed at a location, usually equivalent to the high water springs.
nearlyLowestLowWater	A level approximating the lowest water level observed at a location, usually equivalent to Indian spring low water.
tropicHigherHighWater	The highest of the high waters (or single high water) of the tides occurring semimonthly when the effect of the Moon's maximum declination is greatest.
tropicLowerLowWater	The lowest of the low waters (or single low water) of the tides occurring semimonthly when the effect of the Moon's maximum declination is greatest.**]**

F38.6.   **Hydro - Reporting**

8.6.1.   *Spatial Object Types*

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8.6.1.1. WFD Coastal Water (WFDCoastalWater)

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Constraints of the spatial object type WFDCoastalWater

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8.6.1.2. WFD Ground Water Body (WFDGroundWaterBody)

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8.6.1.3. WFD Lake (WFDLake)

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Constraints of the spatial object type WFDLake

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8.6.1.4.   WFD River (WFDRiver)

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Constraints of the spatial object type WFDRiver

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8.6.1.5.   WFD River Or Lake (WFDRiverOrLake)

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8.6.1.6.   WFD Surface Water Body (WFDSurfaceWaterBody)

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Attributes of the spatial object type WFDSurfaceWaterBody

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Constraints of the spatial object type WFDSurfaceWaterBody

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8.6.1.7.   WFD Transitional Water (WFDTransitionalWater)

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Constraints of the spatial object type WFDTransitionalWater

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8.6.1.8.   WFD Water Body (WFDWaterBody)

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8.7.   **Theme-specific Requirements**

8.7.1.   *Consistency between spatial data sets*

1.   Hydrography links, centrelines and nodes shall always be located within the extent of the area representation of the same object.

2.   Connectivity between hydrographic networks across state borders and – where applicable – also across regional borders (and data sets) within Member States shall

be established and maintained by the respective authorities, using the cross-border connectivity mechanisms provided by the NetworkConnection type.

3.   All attribution of objects in this schema shall be the same as the equivalent property of that object used for reporting obligations under Directive 2000/60/EC.

8.7.2.   *Identifier management*

1.   If a geographical name is used as a unique hydrologic ID for an object in this specification then it shall be derived, where possible, from a pan-European Gazetteer or another authoritative, pan-European source.

2.   The localId attribute of the external object identifier of a spatial object shall be the same as the ID used for reporting obligations under Directive 2000/60/EC.

8.7.3.   *Modelling of object references*

1.   If the same real world object in a data set is exchanged using spatial objects from more than one of the Hydrography application schemas then these spatial objects shall carry either the same, unique, geographical name or the same hydrographic thematic identifier.

2.   When linear referencing is used in hydrographic Network data, the position of referenced properties on links and link sequences shall be expressed as distances measured along the supplied geometry of the underlying link object(s).

8.7.4.   *Geometry representation*

1.   If spatial objects are provided at different spatial resolutions, the spatial resolution must be specified for each spatial object using the levelOfDetail attribute where applicable.

2.   Watercourse links shall intersect wherever a connection exists between the real world phenomena they represent. No intersections shall be created at crossing network elements when it is not possible for water to pass from one element to another.

3.   In a hydrographic network data set which contains nodes, these nodes shall only be present where Watercourse Links connect or end.

4.   The geometry shall be the same as the geometry used for reporting obligations under Directive 2000/60/EC.

8.7.5.   *Use of the DelineationKnown Attribute*

1.   The attribute delineationKnown shall not be used to indicate that the accuracy / precision of a certain geometry is low; this indication should be given using the appropriate data quality element(s).

2.   The attribute delineationKnown shall not be used to indicate a change of geometry over time where this change of geometry is known.

8.7.6.   *Centrelines*

The centrelines of watercourse objects shall fall within the extent of the physical real world object that they represent if the Watercourse Link is indicated as not being 'fictitious'.

8.7.7.   *Ensuring Network Connectivity*

1.   Wherever a connection exists in a hydrographic network, all connected link ends and the optional node that take part in this connection have to be positioned at a distance of less than the connectivity tolerance from each other.

2.   Link ends and nodes that are not connected shall always be separated by a distance that is greater than the connectivity tolerance.

3.   In data sets where both transport links and nodes are present, the relative position of nodes and link ends in relation to the specified connectivity tolerance shall correspond to the associations that exist between them in the data set.

8.8.   **Layers**

LAYERS FOR THE SPATIAL DATA THEME HYDROGRAPHY

[F1Layer Type	Layer Title	Spatial object type(s)
HY.Network	Hydrographic Network	HydroNode, WatercourseLink
HY.PhysicalWaters.Waterbodies	Waterbodies	Watercourse, StandingWater
HY.PhysicalWaters.LandWaterBoundary	Land-Water Boundaries	LandWaterBoundary
HY.PhysicalWaters.Catchments	Catchments	DrainageBasin, RiverBasin
HY.PhysicalWaters.HydroPointOfInterest	Hydro Points of Interest	Rapids, Falls
HY.PhysicalWaters.ManMadeObject	Man-made Objects	Crossing, DamOrWeir, Embankment, Lock, Ford, ShorelineConstruction, Sluice
HY. PhysicalWaters.Wetland	Wetlands	Wetland
HY. PhysicalWaters.Shore	Shores	Shore]

9.   PROTECTED SITES

9.1.   **Spatial Object Types**

The following spatial object types shall be used for the exchange and classification of spatial objects from data sets that relate to the spatial data theme Protected Sites:

—   Protected Site

9.1.1   *Protected Site (ProtectedSite)*

An area designated or managed within a framework of international, Union and Member States' legislation to achieve specific conservation objectives.

ATTRIBUTES OF THE SPATIAL OBJECT TYPE PROTECTEDSITE

Attribute	Definition	Type	Voidability
geometry	The geometry defining the boundary of the Protected Site.	GM_Object	

inspireID	External object identifier of the spatial object.	Identifier	
legalFoundationDate	The date that the protected site was legally created. This is the date that the real world object was created, not the date that its representation in an information system was created.	DateTime	voidable
legalFoundationDocument	An URL or text citation referencing the legal act that created the Protected Site.	CI_Citation	voidable
siteDesignation	The designation (type) of Protected Site.	DesignationType	voidable
siteName	The name of the Protected Site.	GeographicalName	voidable
siteProtectionClassification	The classification of the protected site based on the purpose for protection.	ProtectionClassificationValue	voidable

9.2.   **Data Types**

9.2.1   *Designation Type (DesignationType)*

A data type designed to contain a designation for the Protected Site, including the designation scheme used and the value within that scheme.

Attributes of the data type DesignationType

Attribute	Definition	Type	Voidability
designation	The actual Site designation.	DesignationValue	
designationScheme	The scheme from which the designation code comes.	DesignationSchemeValue	
percentageUnderDesignation	The percentage of the site that falls under the designation. This is used in particular for the IUCN categorisation. If a value is not provided	Percentage	

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	for this attribute, it is assumed to be 100 %	

Constraints of the data type DesignationType

Sites must use designations from an appropriate designation scheme, and the designation code value must agree with the designation scheme.

9.3.   **Enumerations**

9.3.1   *Protection Classification (ProtectionClassificationValue)*

The protected site classification based on the purpose of protection.

ALLOWED VALUES FOR THE ENUMERATION
PROTECTIONCLASSIFICATIONVALUE

Value	Definition
natureConservation	The Protected Site is protected for the maintenance of biological diversity.
archaeological	The Protected Site is protected for the maintenance of archaeological heritage.
cultural	The Protected Site is protected for the maintenance of cultural heritage.
ecological	The Protected Site is protected for the maintenance of ecological stability.
landscape	The Protected Site is protected for the maintenance of landscape characteristics.
environment	The Protected Site is protected for the maintenance of environmental stability.
Geological	The Protected Site is protected for the maintenance of geological characteristics.

9.4.   **Code Lists**

9.4.1.   *Designation Scheme (DesignationSchemeValue)*

The scheme used to assign a designation to the Protected Sites.

This code list may be extended by the Member States.

[^{F4}[^{F1}VALUES FOR THE CODE LIST] DESIGNATIONSCHEMEVALUE

Value	Definition
emeraldNetwork	The Protected Site has a designation under the Emerald Network.
IUCN	The Protected Site has a classification using the International Union for Conservation of Nature classification scheme.

nationalMonumentsRecord	The Protected Site has a classification using the National Monuments Record classification scheme.
natura2000	The Protected Site has a designation under either the Habitat Directive (92/43/EEC) or the Birds Directive (79/409/EEC).
ramsar	The Protected Site has a designation under the Ramsar Convention.
UNESCOManAndBiosphereProgramme	The Protected Site has a designation under UNESCO Man and Biosphere programme.
UNESCOWorldHeritage	The Protected Site has a designation under UNESCO World Heritage Convention.**]**

9.4.2. *Designation (DesignationValue)*

Abstract base type for code lists containing the classification and designation types under different schemes.

This type is abstract.

9.4.3. *IUCN Designation (IUCNDesignationValue)*

A code list for the International Union for the Conservation of Nature classification scheme.

This type is a sub-type of DesignationValue.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] IUCNDESIGNATIONVALUE

Value	Definition
habitatSpeciesManagementArea	The Protected Site is classified as a habitat species management area under the IUCN classification scheme.
managedResourceProtectedArea	The Protected Site is classified as a managed resource protected area under the IUCN classification scheme.
nationalPark	The Protected Site is classified as a national park under the IUCN classification scheme.
naturalMonument	The Protected Site is classified as a natural monument under the IUCN classification scheme.
ProtectedLandscapeOrSeascape	The Protected Site is classified as a protected landscape or seascape under the IUCN classification scheme.
strictNatureReserve	The Protected Site is classified as a strict nature reserve under the IUCN classification scheme.

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wildernessArea	The Protected Site is classified as a wilderness area under the IUCN classification scheme.**]**

9.4.4. *National   Monuments   Record   Designation (NationalMonumentsRecordDesignationValue)*

A code list for the National Monuments Record classification scheme.

This type is a sub-type of DesignationValue.

[[F1]The allowed values for this code list comprise only the values in the table below.**]**

[[F4]**[**[F1]VALUES FOR THE CODE LIST**]**
NATIONALMONUMENTSRECORDDESIGNATIONVALUE

Value	Definition
agricultureAndSubsistence	The Protected Site is classified as an agricultural or subsistence monument under the National Monuments Record classification scheme.
civil	The Protected Site is classified as a civil monument under the National Monuments Record classification scheme.
commemorative	The Protected Site is classified as a commemorative monument under the National Monuments Record classification scheme.
commercial	The Protected Site is classified as a commercial monument under the National Monuments Record classification scheme.
communications	The Protected Site is classified as a communications monument under the National Monuments Record classification scheme.
defence	The Protected Site is classified as a defence monument under the National Monuments Record classification scheme.
domestic	The Protected Site is classified as a domestic monument under the National Monuments Record classification scheme.
education	The Protected Site is classified as an education monument under the National Monuments Record classification scheme.
gardensParksAndUrbanSpaces	The Protected Site is classified as a garden, park or urban space monument under the

	National Monuments Record classification scheme.
healthAndWelfare	The Protected Site is classified as a health and welfare monument under the National Monuments Record classification scheme.
industrial	The Protected Site is classified as an industrial monument under the National Monuments Record classification scheme.
maritime	The Protected Site is classified as a maritime monument under the National Monuments Record classification scheme.
monument	The Protected Site is classified as a monument with some unclassified form under the National Monuments Record classification scheme.
recreational	The Protected Site is classified as a recreational monument under the National Monuments Record classification scheme.
religiousRitualAndFunerary	The Protected Site is classified as a religious, ritual or funerary monument under the National Monuments Record classification scheme.
settlement	The Protected Site is classified as a settlement under the National Monuments Record classification scheme.
transport	The Protected Site is classified as a transport monument under the National Monuments Record classification scheme.
waterSupplyAndDrainage	The Protected Site is classified as a water supply and drainage monument under the National Monuments Record classification scheme.**]**

9.4.5.   *Natura2000 Designation (Natura2000DesignationValue)*

A code list for the Natura2000 designation scheme, in accordance with Council Directive 92/43/ EEC[1] (Habitats Directive).

This type is a sub-type of DesignationValue.

[[F1]The allowed values for this code list comprise only the values in the table below.**]**

[[F4]**[**[F1]VALUES FOR THE CODE LIST**]** NATURA2000DESIGNATIONVALUE

Value	**Definition**

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proposedSiteOfCommunityImportance	The Protected Site is proposed as a Site of Community Importance (SCI) under Natura2000.
proposedSpecialProtectionArea	The Protected Site is proposed as a Special Protection Area (SPA) under Natura2000.
siteOfCommunityImportance	The Protected Site is designated as a Site of Community Importance (SCI) under Natura2000.
specialAreaOfConservation	The Protected Site is designated as a Special Area of Conservation (SAC) under Natura2000.
specialProtectionArea	The Protected Site is designated as a Special Protection Area (SPA) under Natura2000.**]**

9.4.6. *Ramsar Designation (RamsarDesignationValue)*

A code list for the Convention on Wetlands of International Importance (Ramsar Convention) designation scheme.

This type is a sub-type of DesignationValue.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]** RAMSARDESIGNATIONVALUE

Value	Definition
ramsar	The Protected Site is designated under the Ramsar Convention.**]**

9.4.7. *UNESCO Man And Biosphere Programme Designation (UNESCOManAndBiosphereProgrammeDesignationValue)*

A code list for the Man and Biosphere Programme classification scheme.

This type is a sub-type of DesignationValue.

[**F1**The allowed values for this code list comprise only the values in the table below.**]**

[**F4**[**F1**VALUES FOR THE CODE LIST**]**
UNESCOMANANDBIOSPHEREPROGRAMMEDESIGNATIONVALUE

Value	Definition
biosphereReserve	The Protected Site is designated as a Biosphere Reserve under the Man and Biosphere Programme.**]**

9.4.8. *UNESCO World Heritage Designation (UNESCOWorldHeritageDesignationValue)*

A code list for the World Heritage designation scheme.

This type is a sub-type of DesignationValue.

[**F1**The allowed values for this code list comprise only the values in the table below.]

[**F4**[**F1**VALUES FOR THE CODE LIST] UNESCOWORLDHERITAGEDESIGNATIONVALUE

Value	Definition
cultural	The Protected Site is designated as a cultural World Heritage site.
mixed	The Protected Site is designated as a mixed World Heritage site.
natural	The Protected Site is designated as a natural World Heritage site.**]**

9.5.   **Layers**

LAYERS FOR THE SPATIAL DATA THEME PROTECTED SITES

Layer Type	Layer Title	Spatial object type(s)
PS.ProtectedSite	Protected Sites	ProtectedSite

(1)   OJ L 206, 22.7.1992, p. 7.

Changes to legislation:
There are outstanding changes not yet made to Commission Regulation (EU) No 1089/2010. Any changes that have already been made to the legislation appear in the content and are referenced with annotations.
View outstanding changes

Changes and effects yet to be applied to the whole legislation item and associated provisions

–   Annex 1 para. 8.1.3.1 words inserted by S.I. 2018/1338 reg. 13(10)(c)(ii)
–   Annex 1 para. 8.1.3.1 words inserted by S.I. 2018/1338 reg. 13(10)(c)(iii)
–   Annex 1 para. 7.3.3.1 words omitted by S.I. 2018/1338 reg. 13(10)(a)
–   Annex 1 para. 8.1.3.2 words omitted by S.I. 2018/1338 reg. 13(10)(d)(i)
–   Annex 1 para. 8.1.3.2 words omitted by S.I. 2018/1338 reg. 13(10)(d)(ii)
–   Annex 1 para. 8.1.1.1 words substituted by S.I. 2018/1338 reg. 13(10)(b)
–   Annex 1 para. 8.1.3.1 words substituted by S.I. 2018/1338 reg. 13(10)(c)(i)
–   Annex 2 para. 1.3.4(2) omitted by S.I. 2018/1338 reg. 13(11)(b)
–   Annex 2 para. 2.2(2) omitted by S.I. 2018/1338 reg. 13(11)(c)
–   Annex 2 para. 3.1.1 words omitted by S.I. 2018/1338 reg. 13(11)(d)
–   Annex 2 para. 6.1.4 words omitted by S.I. 2018/1338 reg. 13(11)(k)
–   Annex 2 para. 7.6.1.6 words omitted by S.I. 2018/1338 reg. 13(11)(l)
–   Annex 2 para. 7.9.1 words omitted by S.I. 2018/1338 reg. 13(11)(n)
–   Annex 2 para. 8.7.1 words omitted by S.I. 2018/1338 reg. 13(11)(o)(i)
–   Annex 2 para. 9.4.1 words omitted by S.I. 2018/1338 reg. 13(11)(s)(ii)
–   Annex 2 para. 9.4.5 words omitted by S.I. 2018/1338 reg. 13(11)(t)
–   Annex 2 heading words substituted by S.I. 2018/1338 reg. 13(11)(a)
–   Annex 2 para. 3.3.4 words substituted by S.I. 2018/1338 reg. 13(11)(e)(i)
–   Annex 2 para. 3.3.4 words substituted by S.I. 2018/1338 reg. 13(11)(e)(ii)
–   Annex 2 para. 4.2.1.2 words substituted by S.I. 2018/1338 reg. 13(11)(f)
–   Annex 2 para. 4.4(1) words substituted by S.I. 2018/1338 reg. 13(11)(g)
–   Annex 2 para. 5.2.4 words substituted by S.I. 2018/1338 reg. 13(11)(h)
–   Annex 2 para. 5.3.2 words substituted by S.I. 2018/1338 reg. 13(11)(i)
–   Annex 2 para. 6.1 words substituted by S.I. 2018/1338 reg. 13(11)(j)
–   Annex 2 para. 7.7.1.15 words substituted by S.I. 2018/1338 reg. 13(11)(m)
–   Annex 2 para. 8.7.1 words substituted by S.I. 2018/1338 reg. 13(11)(o)(ii)
–   Annex 2 para. 8.7.2 words substituted by S.I. 2018/1338 reg. 13(11)(p)
–   Annex 2 para. 8.7.4 words substituted by S.I. 2018/1338 reg. 13(11)(q)
–   Annex 2 para. 9.1.1 words substituted by S.I. 2018/1338 reg. 13(11)(r)
–   Annex 2 para. 9.4.1 words substituted by S.I. 2018/1338 reg. 13(11)(s)(i)
–   Art. 2(2) words substituted by S.I. 2018/1338 reg. 13(3)(a)
–   Art. 2(3) words substituted by S.I. 2018/1338 reg. 13(3)(b)
–   Art. 2(20) words substituted by S.I. 2018/1338 reg. 13(3)(c)
–   Art. 2(39)(40) inserted by S.I. 2018/1338 reg. 13(3)(d)
–   Annex 3 heading words substituted by S.I. 2018/1338 reg. 13(12)(a)
–   Annex 3 para. 1.7.5 point (3) words substituted by S.I. 2018/1338 reg. 13(12)(b)
–   Annex 4 para. 1.5 point (2) omitted by S.I. 2018/1338 reg. 13(13)(b)
–   Annex 4 para. 16.2.3 word inserted by S.I. 2018/1338 reg. 13(13)(p)(i)
–   Annex 4 para. 18.4.8 word omitted by S.I. 2018/1338 reg. 13(13)(u)(ii)
–   Annex 4 para. 4.7.1.1 word substituted by S.I. 2018/1338 reg. 13(13)(c)(i)
–   Annex 4 para. 4.7.1.1 word substituted by S.I. 2018/1338 reg. 13(13)(c)(ii)
–   Annex 4 para. 4.7.1.3.1 word substituted by S.I. 2018/1338 reg. 13(13)(e)(iii)
–   Annex 4 para. 18.4.8 word substituted by S.I. 2018/1338 reg. 13(13)(u)(i)
–   Annex 4 para. 5.1.5 words inserted by S.I. 2018/1338 reg. 13(13)(h)
–   Annex 4 para. 10.3.2 words inserted by S.I. 2018/1338 reg. 13(13)(k)
–   Annex 4 para. 11.3.1 words inserted by S.I. 2018/1338 reg. 13(13)(l)(iii)(bb)
–   Annex 4 para. 11.3.1 words inserted by S.I. 2018/1338 reg. 13(13)(l)(vii)(aa)
–   Annex 4 para. 17.4.2 words inserted by S.I. 2018/1338 reg. 13(13)(q)(i)(aa)
–   Annex 4 para. 17.4.2 words inserted by S.I. 2018/1338 reg. 13(13)(q)(i)(bb)

– Annex 4 para. 17.4.2 words inserted by S.I. 2018/1338 reg. 13(13)(q)(ii)
– Annex 4 para. 17.4.3 words inserted by S.I. 2018/1338 reg. 13(13)(r)(ii)(bb)
– Annex 4 para. 18.4.2 words inserted by S.I. 2018/1338 reg. 13(13)(s)(ii)
– Annex 4 para. 4.7.1.2 words omitted by S.I. 2018/1338 reg. 13(13)(d)(i)
– Annex 4 para. 4.7.1.2 words omitted by S.I. 2018/1338 reg. 13(13)(d)(ii)
– Annex 4 para. 4.7.3.4 words omitted by S.I. 2018/1338 reg. 13(13)(f)
– Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(iv)
– Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(v)
– Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(vi)
– Annex 4 para. 11.3.1 words omitted by S.I. 2018/1338 reg. 13(13)(l)(vii)(bb)
– Annex 4 para. 11.4.1 point (3)(b) words omitted by S.I. 2018/1338 reg. 13(13)(m)
– Annex 4 para. 13.2.1.1 words omitted by S.I. 2018/1338 reg. 13(13)(n)
– Annex 4 para. 13.3 point (3) words omitted by S.I. 2018/1338 reg. 13(13)(o)
– Annex 4 para. 16.2.3 words omitted by S.I. 2018/1338 reg. 13(13)(p)(ii)
– Annex 4 para. 17.4.3 words omitted by S.I. 2018/1338 reg. 13(13)(r)(i)
– Annex 4 para. 18.4.7 words omitted by S.I. 2018/1338 reg. 13(13)(t)
– Annex 4 para. 19.1 words omitted by S.I. 2018/1338 reg. 13(13)(v)
– Annex 4 para. 11.3.1 words omted by S.I. 2018/1338 reg. 13(13)(l)(ix)
– Annex 4 heading words substituted by S.I. 2018/1338 reg. 13(13)(a)
– Annex 4 para. 4.7.1.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(e)(i)
– Annex 4 para. 4.7.1.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(e)(ii)
– Annex 4 para. 4.8 point (4) words substituted by S.I. 2018/1338 reg. 13(13)(g)(i)
– Annex 4 para. 4.8 point (5) words substituted by S.I. 2018/1338 reg. 13(13)(g)(ii)
– Annex 4 para. 6.9.1.1 words substituted by S.I. 2018/1338 reg. 13(13)(i)
– Annex 4 para. 9.1 point (1) words substituted by S.I. 2018/1338 reg. 13(13)(j)(i)
– Annex 4 para. 9.1 point (2) words substituted by S.I. 2018/1338 reg. 13(13)(j)(ii)
– Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(i)
– Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(ii)
– Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(iii)(aa)
– Annex 4 para. 11.3.1 words substituted by S.I. 2018/1338 reg. 13(13)(l)(viii)
– Annex 4 para. 17.4.3 words substituted by S.I. 2018/1338 reg. 13(13)(r)(ii)(aa)
– Annex 4 para. 18.4.2 words substituted by S.I. 2018/1338 reg. 13(13)(s)(i)
– Annex 4 para. 18.4.8 words substituted by S.I. 2018/1338 reg. 13(13)(u)(iii)
– Annex 7 para. 2 words substituted by S.I. 2018/1338 reg. 13(14)