Pollution

Norwegian Mapping Authority
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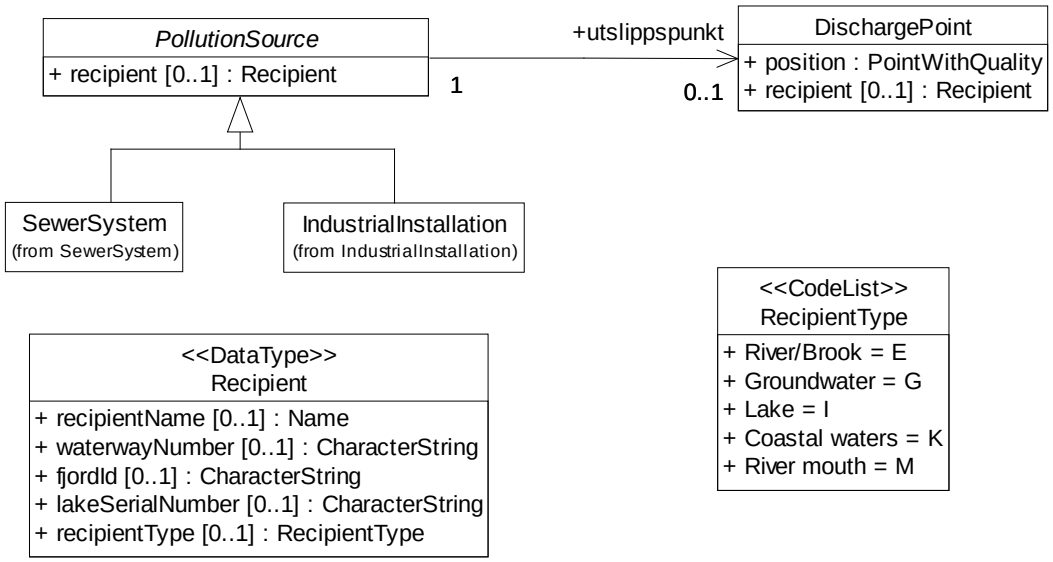
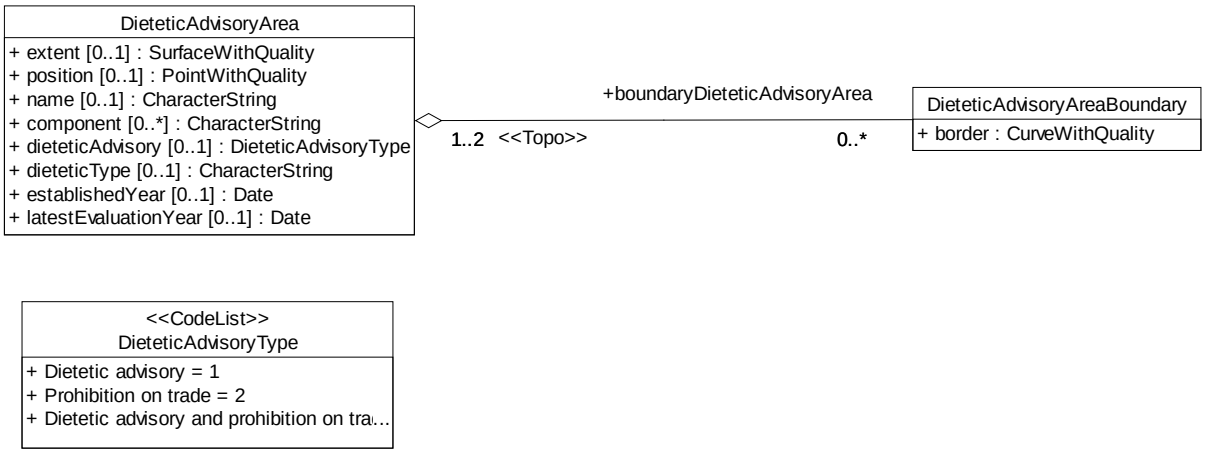
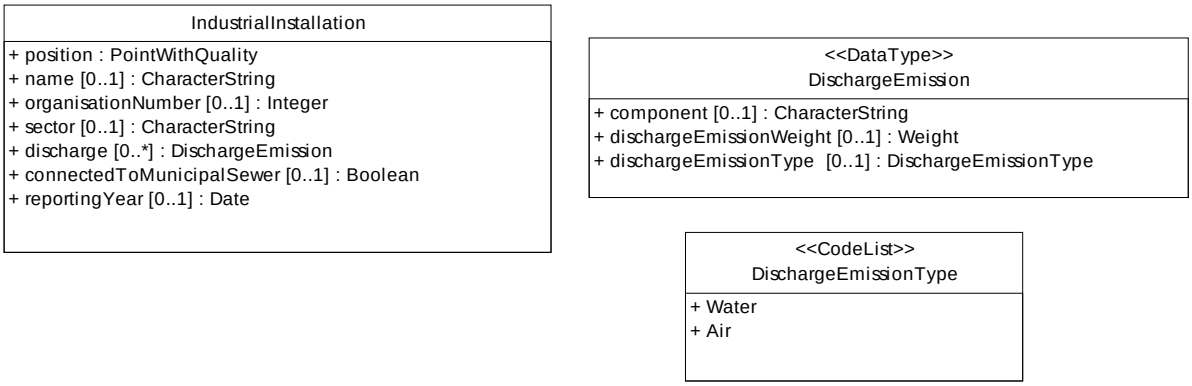


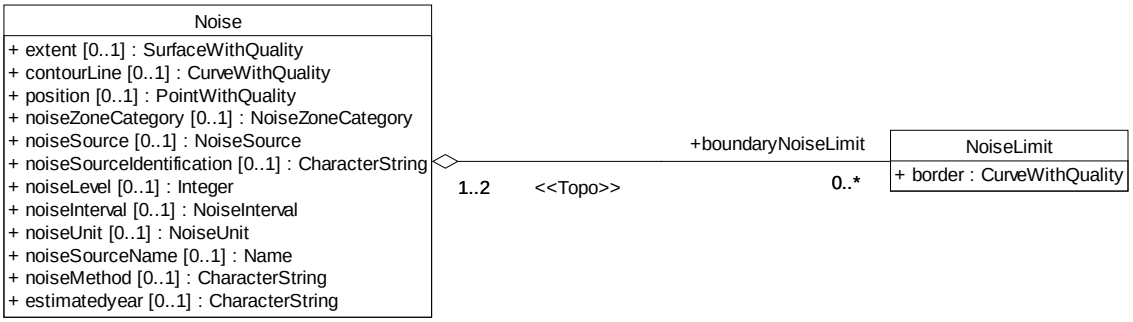
Dieteticadvisor

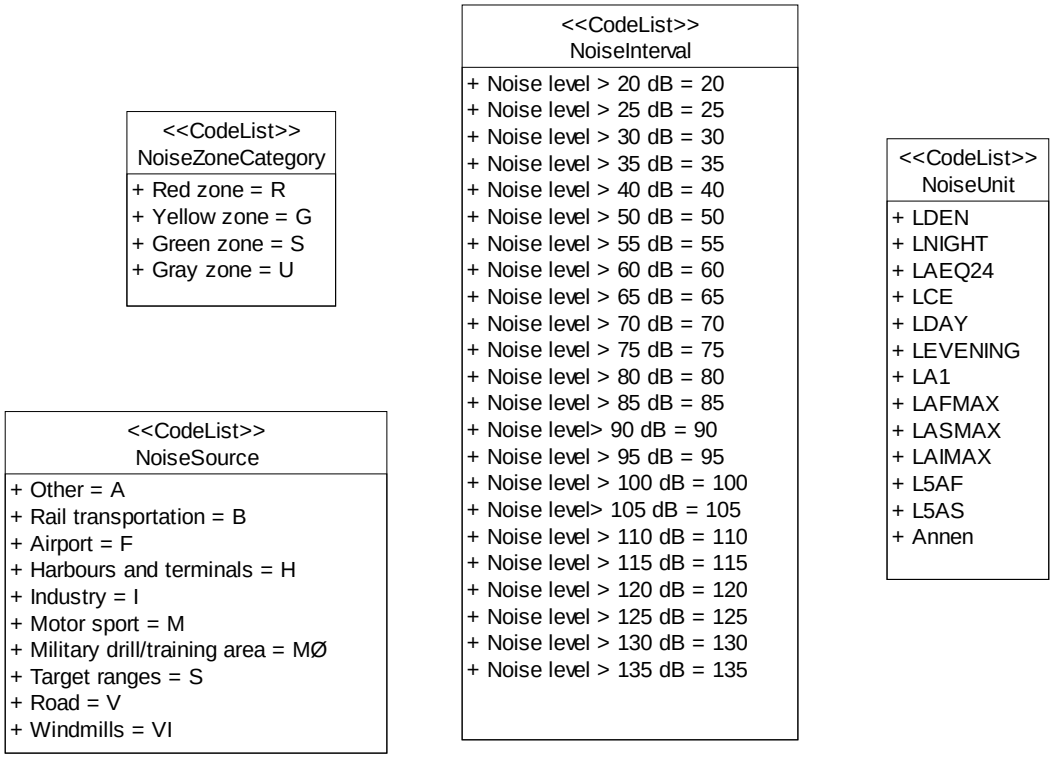


IndustrialInstallation

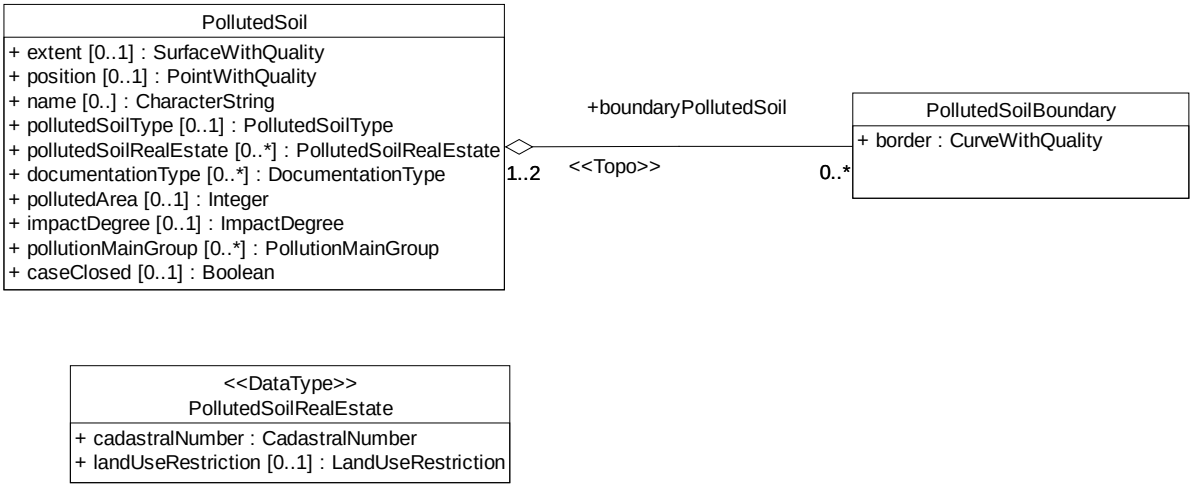


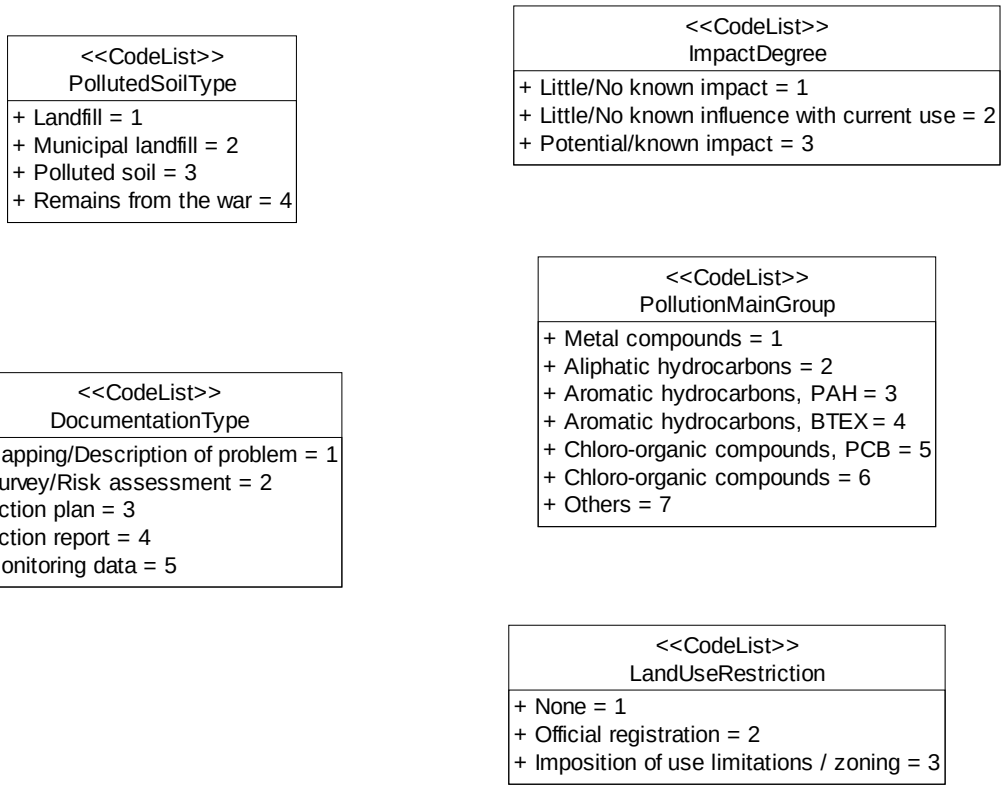
Noise



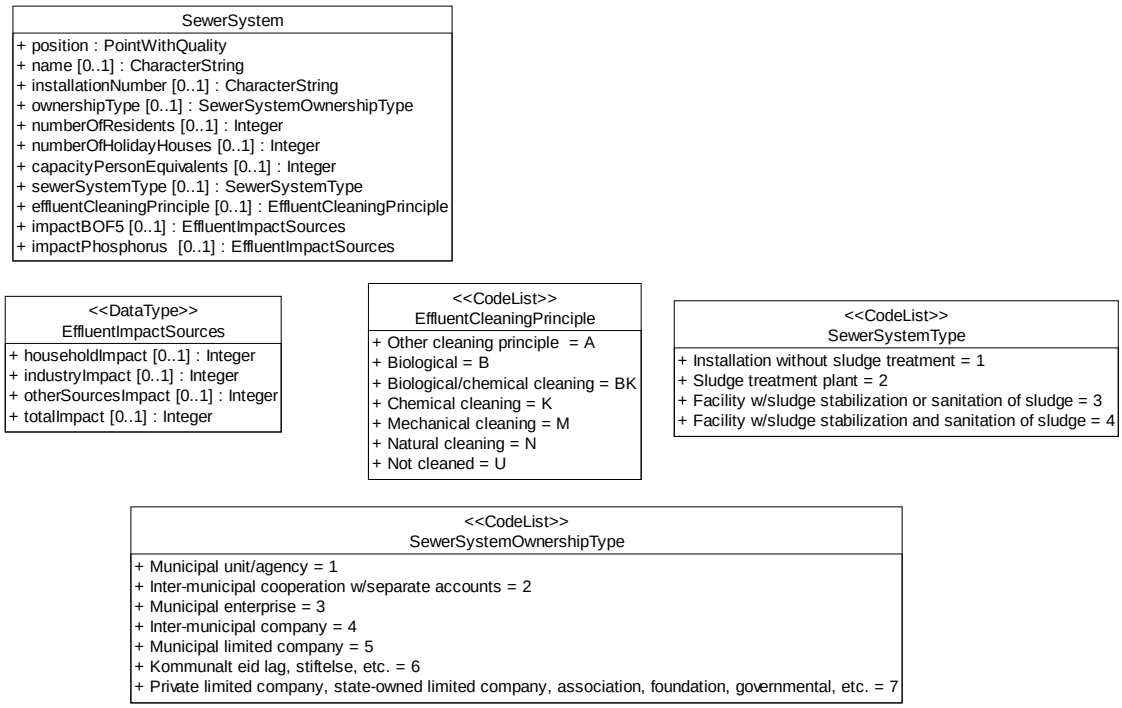


PollutedSoil





SewerSystem



1.2 Description

1.2.1 Dieteticadvisor

1.2.1.1 DieteticAdvisoryArea

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class DieteticAdvisoryArea	area where an advisory has been issued regarding consumption, or the sale of fish and seafood has been prohibited				
1.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
1.2	position	location where the object exists	0	1	PointWithQuality	
1.3	name		0	1	CharacterString	
1.4	component	code for chemical substance or parameter Note: In the long term the codes should be standardised, but this has not been possible within the scope of the SOSI work.	0	N	CharacterString	
1.5	dieteticAdvisory	indicates the type of restriction issued for an area	0	1	DieteticAdvisoryType	
1.6	dieteticType	indicates what species or types of organisms the restrictions include	0	1	CharacterString	
1.7	establishedYear	what year the restrictions were issued	0	1	Date	
1.8	latestEvaluationYear	year when the restrictions were last evaluated	0	1	Date	
1.9	Role boundaryDieteticAdvisoryArea		0	N	DieteticAdvisoryAreaBoundary	Aggregration

1.2.1.2 DieteticAdvisoryAreaBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class DieteticAdvisoryAreaBoundary	delimitation of dietetic advisory area				
2.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	

2.2	Role (unnamed) DieteticAdvisoryArea		1	2	DieteticAdvisoryArea	

1.2.1.3 Association <<Topo>> DieteticAdvisoryArea-DieteticAdvisoryAreaBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Association DieteticAdvisoryArea-DieteticAdvisoryAreaBoundary					
3.1	Role boundaryDieteticAdvisoryArea		0	N	DieteticAdvisoryAreaBoundary	Aggregation
3.2	Role (unnamed) DieteticAdvisoryArea		1	2	DieteticAdvisoryArea	

1.2.1.3.1 <<CodeList>> DieteticAdvisoryType

Nr	Code name	Definition/Description	Code
1	CodeList DieteticAdvisoryType	indicates the type of restriction issued for the area	
1.1	Dietetic advisory		1
1.2	Prohibition on trade		2
	Dietetic advisory and prohibition on trade		3

1.2.2 IndustrialInstallation

1.2.2.1 IndustrialInstallation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class IndustrialInstallation	land-based installation for industrial production				Subtype of PollutionSource
1.1	position	location where the object exists	1	1	PointWithQuality	
1.2	name		0	1	CharacterString	
1.3	organisationNumber		0	1	Integer	
1.4	sector	sector code from the NACE standard	0	1	CharacterString	
1.5	discharge	quantity and type of discharge from a source	0	N	DischargeEmission	
1.6	connectedToMunicipalSewer	indicates whether the discharge to water goes into the municipal sewer system	0	1	Boolean	
1.7	reportingYear	what year the reported discharges apply to	0	1	Date	

1.2.2.2 <<DataType>> DischargeEmission

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Datatype DischargeEmission	indicates quantity and type of discharge/emission from a source				
2.1	component	code for chemical substance or parameter Note: In the long term, the codes should be standardised, but this has not been possible within the scope of the SOSI work. Data from the Norwegian Pollution Control Authority (SFT's technical system will contain standardised codes	0	1	CharacterString	
2.2	dischargeEmissionWeight		0	1	Weight	
2.3	dischargeEmissionType	indicates whether a discharge to water or an emission to air	0	1	DischargeEmissionType	

1.2.2.2.1 <<CodeList>> DischargeEmissionType

Nr	Code name	Definition/Description	Code
1	CodeList DischargeEmissionType	indicates whether a discharge to water or an emission to air	
1.1	Water		
	Air		

1.2.3 Noise

1.2.3.1 Noise

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class Noise	area with certain features relating to noise level. Note: May be represented as noise zones, noise isopleths or points with measured or calculated values				
1.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
1.2	contourLine		0	1	CurveWithQuality	
1.3	position	location where the object exists	0	1	PointWithQuality	
1.4	noiseZoneCategory	noise zone for planning purposes	0	1	NoiseZoneCategory	
1.5	noiseSource	types of noise sources	0	1	NoiseSource	
1.6	noiseSourceIdentification	unique identification of the noise source Note: E.g. section name or road number. Not relevant where several sources are calculated jointly, e.g. zones for the entire network of roads in a municipality	0	1	CharacterString	
1.7	noiseLevel	indication of calculated noise level [in dB] ?? Note: The value must be an integer between 0 and 140	0	1	Integer	
1.8	noiseInterval	division into regular intervals for noise level	0	1	NoiseInterval	
1.9	noiseUnit	unit for noise zone	0	1	NoiseUnit	
1.10	noiseSourceName	name of the noise source Note: E.g. street_name, road number, airport, company, etc.	0	1	Name	
1.11	noiseMethod	indication of the method used to calculate the sound ??(impact/pressure level) Note: Must always refer to a method such as for instance the Nordic method for road [noise] (1996) or ISO 9613-2. Please also indicate	0	1	CharacterString	

		calculation tool (VSTØY, TSTØY Cadna, e				
1.12	estimatedyear	year or period to which the noise calculations apply Note: May be the current situation, year of the forecast, or the worst-case combination of several years	0	1	CharacterString	
1.13	Role boundaryNoiseLimit		0	N	NoiseLimit	Aggregration

1.2.3.2 NoiseLimit

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class NoiseLimit	delimitation of noise zone				
2.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
2.2	Role (unnamed) Noise		1	2	Noise	

1.2.3.3 Association <<Topo>> Noise-NoiseLimit

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Association Noise-NoiseLimit					
3.1	Role boundaryNoiseLimit		0	N	NoiseLimit	Aggregation
3.2	Role (unnamed) Noise		1	2	Noise	

1.2.3.3.1 <<CodeList>> NoiseSource

Nr	Code name	Definition/Description	Code
1	CodeList NoiseSource	types of noise sources	
1.1	Other	other sources, or where several sources jointly define a noise zone	A
1.2	Rail transportation	Railway, tram, subway	B
1.3	Airport	Includes helicopter landing pad	F
1.4	Harbours and terminals	Harbours, freight terminals, public transport terminals, etc.	H
1.5	Industry	Industry and other types of noisy business activity	I
1.6	Motor sport	racing track, tracks for driver training	M
1.7	Military drill/training area		MØ
1.8	Target ranges	Target ranges for calibers < 20 mm (not firing range)	S
1.9	Road	all types of roads: state highway, European highway, county road, municipal road, private road	V
1.10	Windmills		VI

1.2.3.3.2 <<CodeList>> NoiseInterval

Nr	Code name	Definition/Description	Code
2	CodeList NoiseInterval	division into regular intervals for noise level	
2.1	Noise level > 20 dB		20
2.2	Noise level > 25 dB		25
2.3	Noise level > 30 dB		30
2.4	Noise level > 35 dB		35
2.5	Noise level > 40 dB		40
2.6	Noise level > 50 dB		50
2.7	Noise level > 55 dB		55
2.8	Noise level > 60 dB		60
2.9	Noise level > 65 dB		65
2.10	Noise level > 70 dB		70
2.11	Noise level > 75 dB		75
2.12	Noise level > 80 dB		80
2.13	Noise level > 85 dB		85
2.14	Noise level> 90 dB		90
2.15	Noise level > 95 dB		95

2.16	Noise level > 100 dB		100
2.17	Noise level> 105 dB		105
2.18	Noise level > 110 dB		110
2.19	Noise level > 115 dB		115
2.20	Noise level > 120 dB		120
2.21	Noise level > 125 dB		125
2.22	Noise level > 130 dB		130
2.23	Noise level > 135 dB		135

1.2.3.3.3 <<CodeList>> NoiseUnit

Nr	Code name	Definition/Description	Code
3	CodeList NoiseUnit	unit for noise zone	
3.1	LDEN	dag-kveld-natt gjennomsnittlig støynivå	
3.2	LNIGHT	ekvivalent årsgjennomsnittlig støynivå for nattperioden (23-07)	
3.3	LAEQ24	ekvivalent (gjennomsnittlig) A-veid støynivå for et døgn	
3.4	LCE	C-veid lydnivå for enkelthendelser, normalisert til 1 sekund	
3.5	LDAY	ekvivalent årsgjennomsnittlig støynivå for dagperioden (07-19)	
3.6	LEVENING	ekvivalent årsgjennomsnittlig støynivå for kveldsperioden	
3.7	LA1	støynivået som overskrides i 1% av tiden	
3.8	LAFMAX	maksimalt støynivå med tidsveiing "Fast"	
3.9	LASMAX	maksimalt støynivå med tidsveiing "Slow"	
3.10	LAIMAX	maksimalt støynivå med tidsveiing "Impulse"	
3.11	L5AF	5-prosent statistisk maksimalnivå av antall hendelser, tidsveiing "Fast"	
3.12	L5AS	5-prosent statistisk maksimalnivå av antall hendelser, tidsveiing "Slow"	
3.13	Annen	Oppgi annen målestørrelse	

1.2.3.3.4 <<CodeList>> NoiseZoneCategory

Nr	Code name	Definition/Description	Code
4	CodeList NoiseZoneCategory	noise zone for planning purposes	
4.1	Red zone	areas which are not suitable for noise sensitive use, and development of new noise sensitive building developments should be avoided	R
4.2	Yellow zone	evaluation zone where noise sensitive building developments may be built if corrective measures yield satisfactory noise conditions	G

4.3	Green zone	valuable quiet areas, defined by the municipality	S
4.4	Gray zone	areas where the noise zone has not been ??surveyed/identified	U

1.2.4 PollutedSoil

1.2.4.1 PollutedSoil

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class PollutedSoil	real estate with polluted soil, landfill with hazardous waste, formerly polluted real estate which has been cleaned up				
1.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
1.2	position	location where the object exists	0	1	PointWithQuality	
1.3	name		0	N	CharacterString	
1.4	pollutedSoilType	type of site	0	1	PollutedSoilType	
1.5	pollutedSoilRealEstate	real estate plots on which the site is located, and whether these plots are subject to land use restrictions	0	N	PollutedSoilRealEstate	
1.6	documentationType	type of documentation available for the individual site, which forms the basis for the assessments	0	N	DocumentationType	
1.7	pollutedArea	estimated size of the polluted area given in square meters Note: Necessary where the site is indicated by points	0	1	Integer	
1.8	impactDegree	indicates to what extent the site affects its surroundings Note: The degree of impact is assessed based on available information on the individual site. The degree of impact of a site changes as warranted by surveys or measures implemented	0	1	ImpactDegree	
1.9	pollutionMainGroup	indicates which main types of pollution one assumes exist at the site	0	N	PollutionMainGroup	
1.10	caseClosed	indicates whether the case has been closed by the pollution authorities	0	1	Boolean	
1.1	Role		0	N	PollutedSoilBo	Aggregrati

1	boundaryPolluted Soil				undary	on

1.2.4.2 PollutedSoilBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class PollutedSoilBoundary	delimitation of polluted soil				
2.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
2.2	Role (unnamed) PollutedSoil		1	2	PollutedSoil	

1.2.4.3 <<DataType>> PollutedSoilRealEstate

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Datatype PollutedSoilRealEstate	real estate where the site is located, and whether this real estate is subject to land use restrictions				
3.1	cadastralNumber	unique identification of cadastral unit within municipality	1	1	CadastralNumber	
3.2	landUseRestriction	whether there are restrictions on land use on the real estate	0	1	LandUseRestriction	

1.2.4.4 Association <<Topo>> PollutedSoil-PollutedSoilBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Association PollutedSoil-PollutedSoilBoundary					
4.1	Role boundaryPolluted Soil		0	N	PollutedSoilBoundary	Aggregation
4.2	Role (unnamed) PollutedSoil		1	2	PollutedSoil	

1.2.4.4.1 <<CodeList>> LandUseRestriction

Nr	Code name	Definition/Description	Code
1	CodeList LandUseRestriction	whether there are land use restrictions on the real estate	
1.1	None		1
1.2	Official registration	FF-Official registration in accordance with the Norwegian Pollution Act	2
1.3	Imposition of use limitations / zoning	FF-Imposition of use limitations / zoning in accordance with the Norwegian Planning and Building Act	3

1.2.4.4.2 <<CodeList>> PollutedSoilType

Nr	Code name	Definition/Description	Code
2	CodeList PollutedSoilType	rough classification of sites with polluted soil	
2.1	Landfill		1
2.2	Municipal landfill		2
2.3	Polluted soil		3
2.4	Remains from the war		4

1.2.4.4.3 <<CodeList>> PollutionMainGroup

Nr	Code name	Definition/Description	Code
3	CodeList PollutionMainGroup	indicates which main types of pollution one assumes exist at the site	
3.1	Metal compounds		1
3.2	Aliphatic hydrocarbons		2
3.3	Aromatic hydrocarbons, PAH		3
3.4	Aromatic hydrocarbons, BTEX		4
3.5	Chloro-organic compounds, PCB		5
3.6	Chloro-organic compounds		6
3.7	Others		7

1.2.4.4.4 <<CodeList>> DocumentationType

Nr	Code name	Definition/Description	Code
4	CodeList	type of documentation available for the individual site, which forms the basis for the	

	DocumentationType	assessments	
4.1	Mapping/Description of problem		1
4.2	Survey/Risk assessment		2
4.3	Action plan		3
4.4	Action report		4
4.5	Monitoring data		5

1.2.4.4.5 <<CodeList>> ImpactDegree

Nr	Code name	Definition/Description	Code
5	CodeList ImpactDegree	indicates to what extent the site affects its surroundings. Note: The degree of impact is assessed based on available information on the individual site. The degree of impact of a site changes as warranted by surveys or measures implemented Merknad: Påvirkningsgraden er vurdert ut fra tilgjengelig informasjon om den enkelte lokalitet. En lokalitet endrer påvirkningsgrad hvis gjennomførte tiltak eller undersøkelser gir grunn til det	
5.1	Little/No known impact	Little/No known impact, no need for restrictions on area/recipient use	1
5.2	Little/No known influence with current use	Little/No known influence with current area/recipient use	2
5.3	Potential/known impact	Potential/known impact and need for survey/measures	3

1.2.5 SewerSystem

1.2.5.1 SewerSystem

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class SewerSystem	facility which receives and processes waste water				Subtype of PollutionSource
1.1	position	location where the object exists	1	1	PointWithQuality	
1.2	name	name of installation	0	1	CharacterString	
1.3	installationNumber	local identification of the sewer system	0	1	CharacterString	
1.4	ownershipType	type of ownership of the sewer system	0	1	SewerSystemOwnershipType	
1.5	numberOfResidents	number of resident persons connected to the sewer system	0	1	Integer	
1.6	numberOfHolidayHouses	number of holiday houses connected to the sewer system	0	1	Integer	
1.7	capacityPersonEquivalents	capacity of the installation in person equivalents	0	1	Integer	
1.8	sewerSystemType	type of sewer system	0	1	SewerSystemType	
1.9	effluentCleaningPrinciple	which cleaning principle is used in the sewer system	0	1	EffluentCleaningPrinciple	
1.10	impactBOF5	impact of organic matter on the treatment plant. The quantity of organic matter which will be biodegraded with biochemical oxygen consumption measured over five days and nights, BOF5.	0	1	EffluentImpactSources	
1.11	impactPhosphorus	impact of phosphorus on the treatment plant	0	1	EffluentImpactSources	

1.2.5.2 <<DataType>> EffluentImpactSources

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Datatype EffluentImpactSources	indicates average ??(impacts on/flow rates to) the treatment plant from various sources				
2.1	householdImpact	quantified impact in	0	1	Integer	

		kg/year from households				
2.2	industryImpact	quantified impact in kg/year from industry	0	1	Integer	
2.3	otherSourcesImpact	quantified impact in kg/year from other sources	0	1	Integer	
2.4	totalImpact	total quantified impact in kg/year	0	1	Integer	

1.2.5.2.1 <<CodeList>> SewerSystemType

Nr	Code name	Definition/Description	Code
1	CodeList SewerSystemType	classification of sewer system type	
1.1	Installation without sludge treatment		1
1.2	Sludge treatment plant		2
1.3	Facility w/sludge stabilization or sanitation of sludge		3
1.4	Facility w/sludge stabilization and sanitation of sludge		4

1.2.5.2.2 <<CodeList>> EffluentCleaningPrinciple

Nr	Code name	Definition/Description	Code
2	CodeList EffluentCleaningPrinciple	rough classification of cleaning methods for waste water	
2.1	Other cleaning principle		A
2.2	Biological		B
2.3	Biological/chemical cleaning		BK
2.4	Chemical cleaning		K
2.5	Mechanical cleaning		M
2.6	Natural cleaning		N
2.7	Not cleaned		U

1.2.5.2.3 <<CodeList>> SewerSystemOwnershipType

Nr	Code name	Definition/Description	Code
3	CodeList SewerSystemOwnershipType	classification of various ownership types for the sewer system	
3.1	Municipal unit/agency		1
3.2	Inter-municipal cooperation w/separate accounts		2
3.3	Municipal enterprise		3
3.4	Inter-municipal company		4
3.5	Municipal limited company		5
3.6	Kommunalt eid lag, stiftelse, etc.	Eksempel:	6

		BA, DA, FLI, STI	
3.7	Private limited company, state-owned limited company, association, foundation, governmental, etc.		7