Other building constructions

Norwegian Mapping Authority

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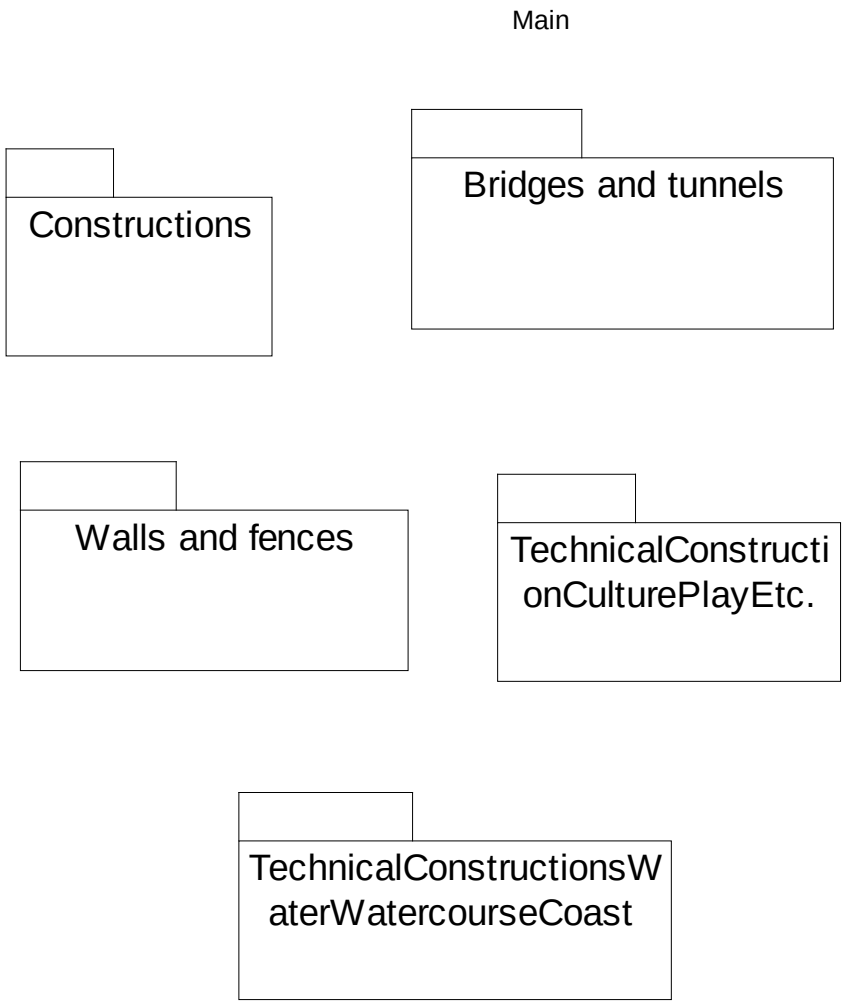
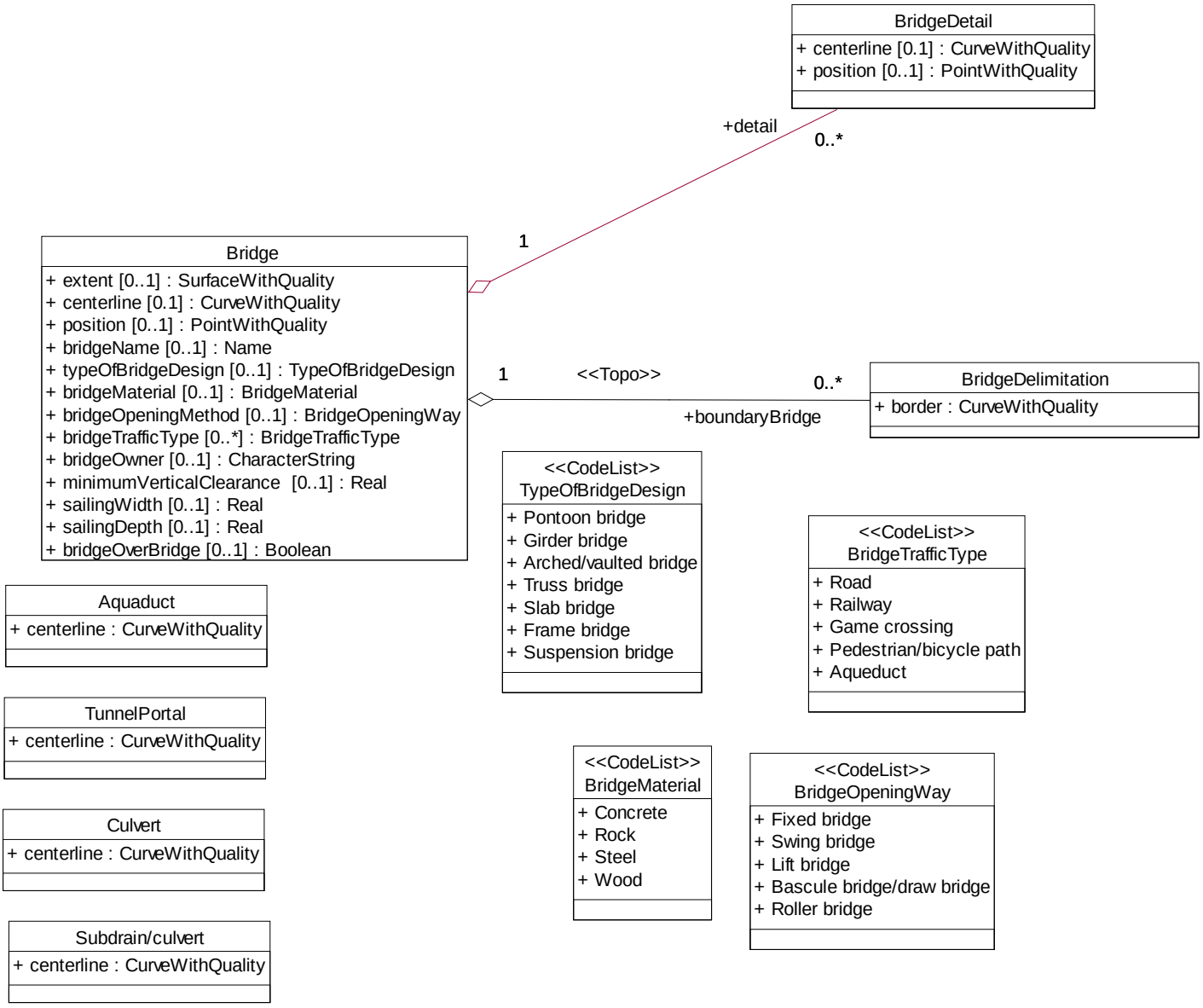
Table of contents

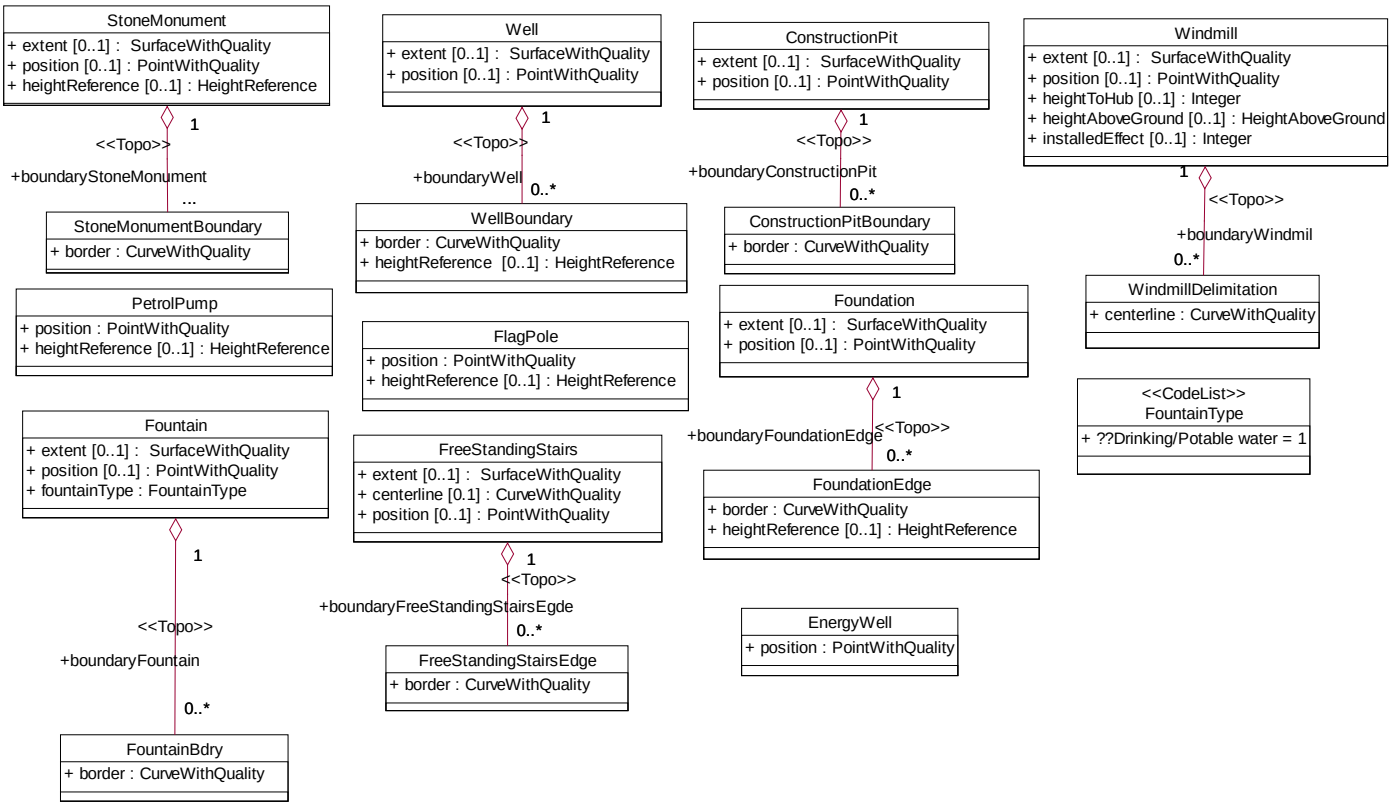
1.1 Application schema



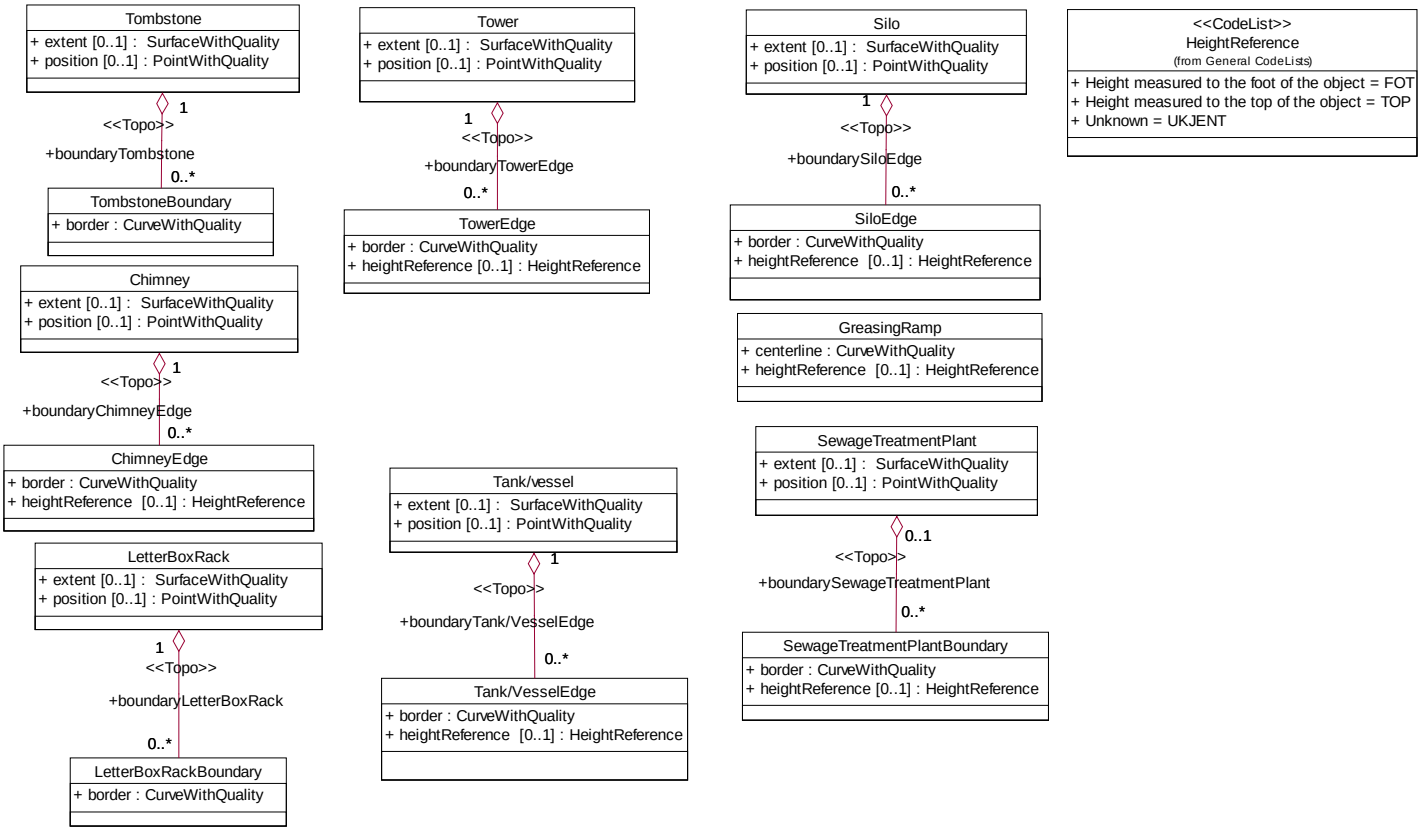
Bridges and tunnels



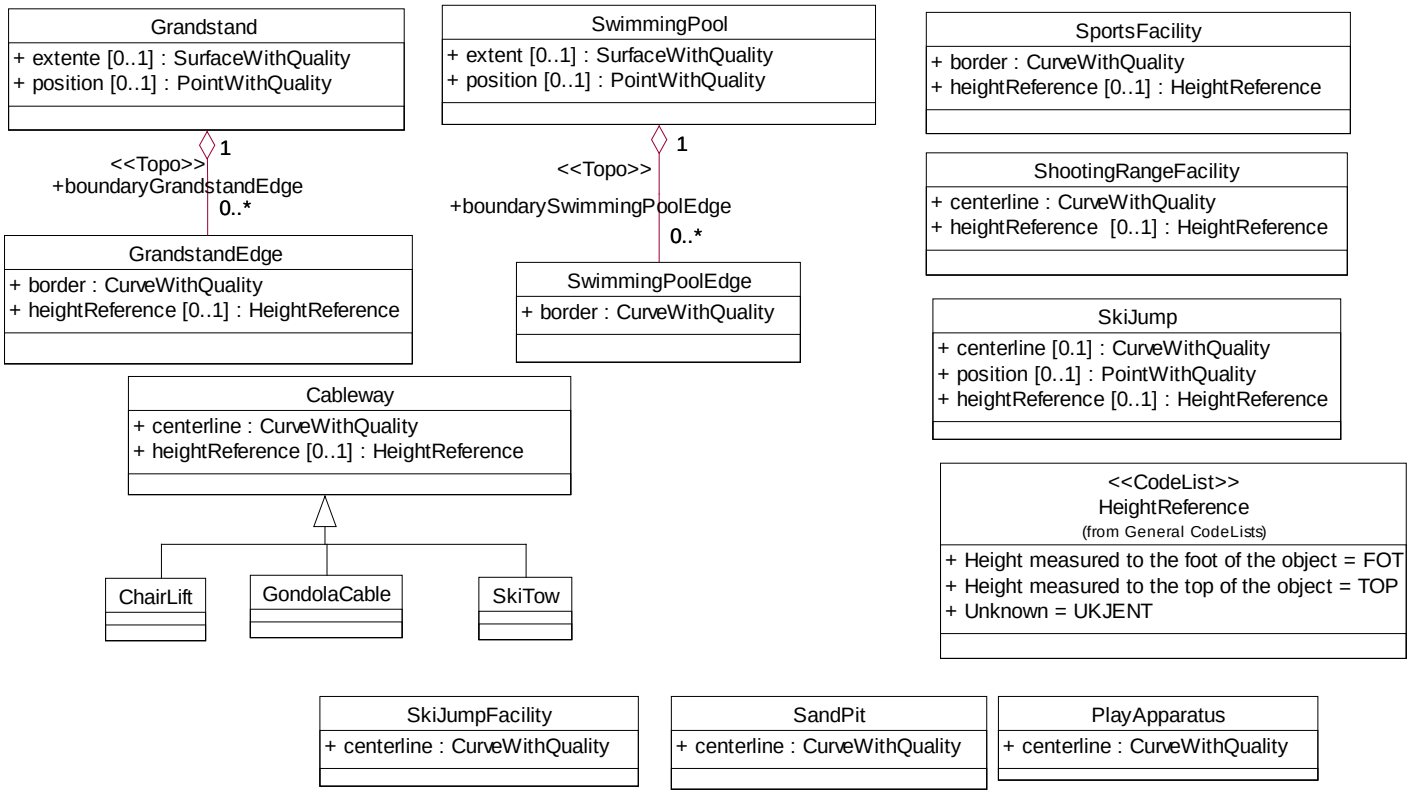
Constructions – Package 1



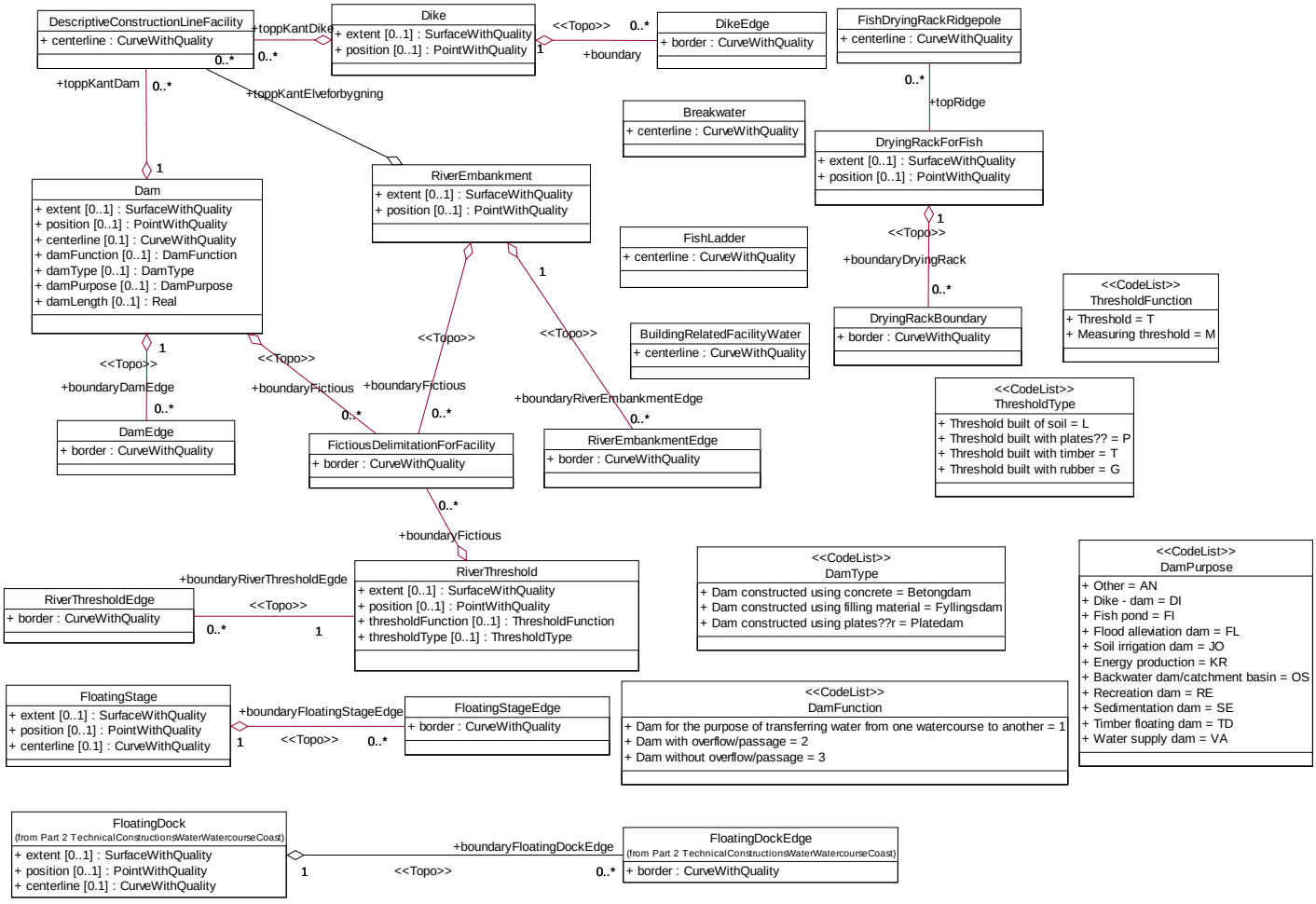
Constructions – Package 2



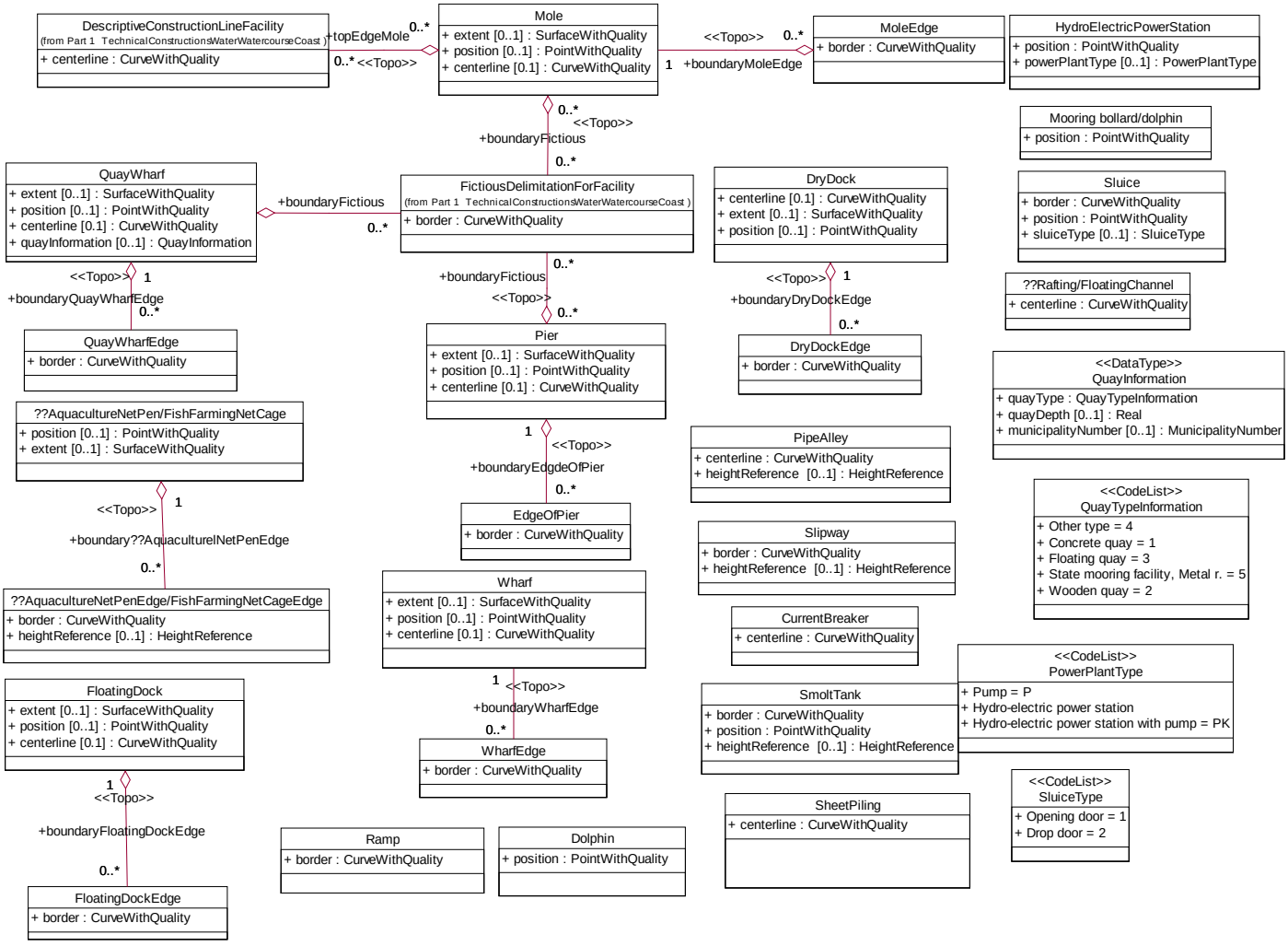
TechnicalConstructionCulturePlayEtc.



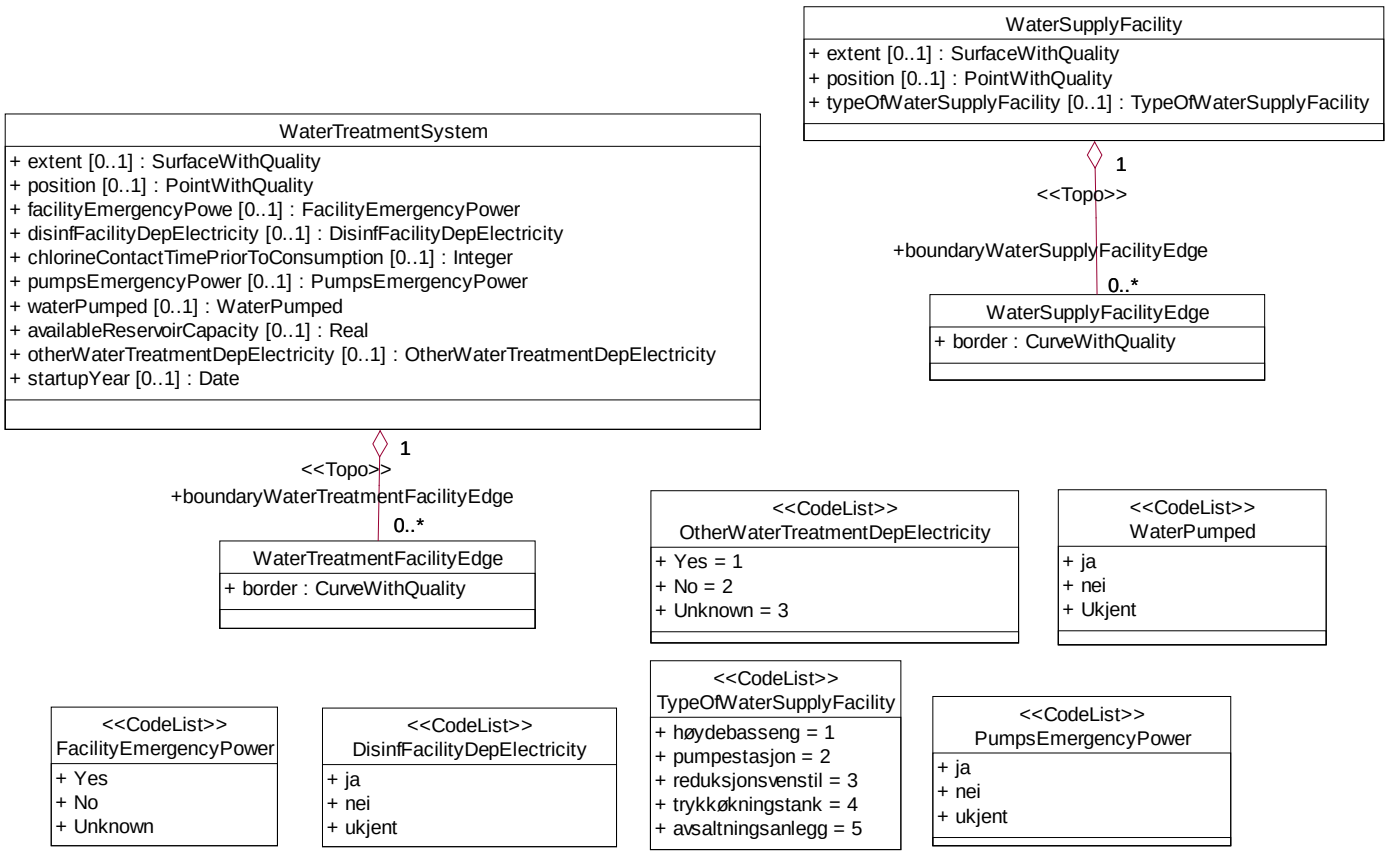
TechnicalConstructionsWaterWatercourseCoast – Part 1
TechnicalConstructionsWaterWatercourseCoast



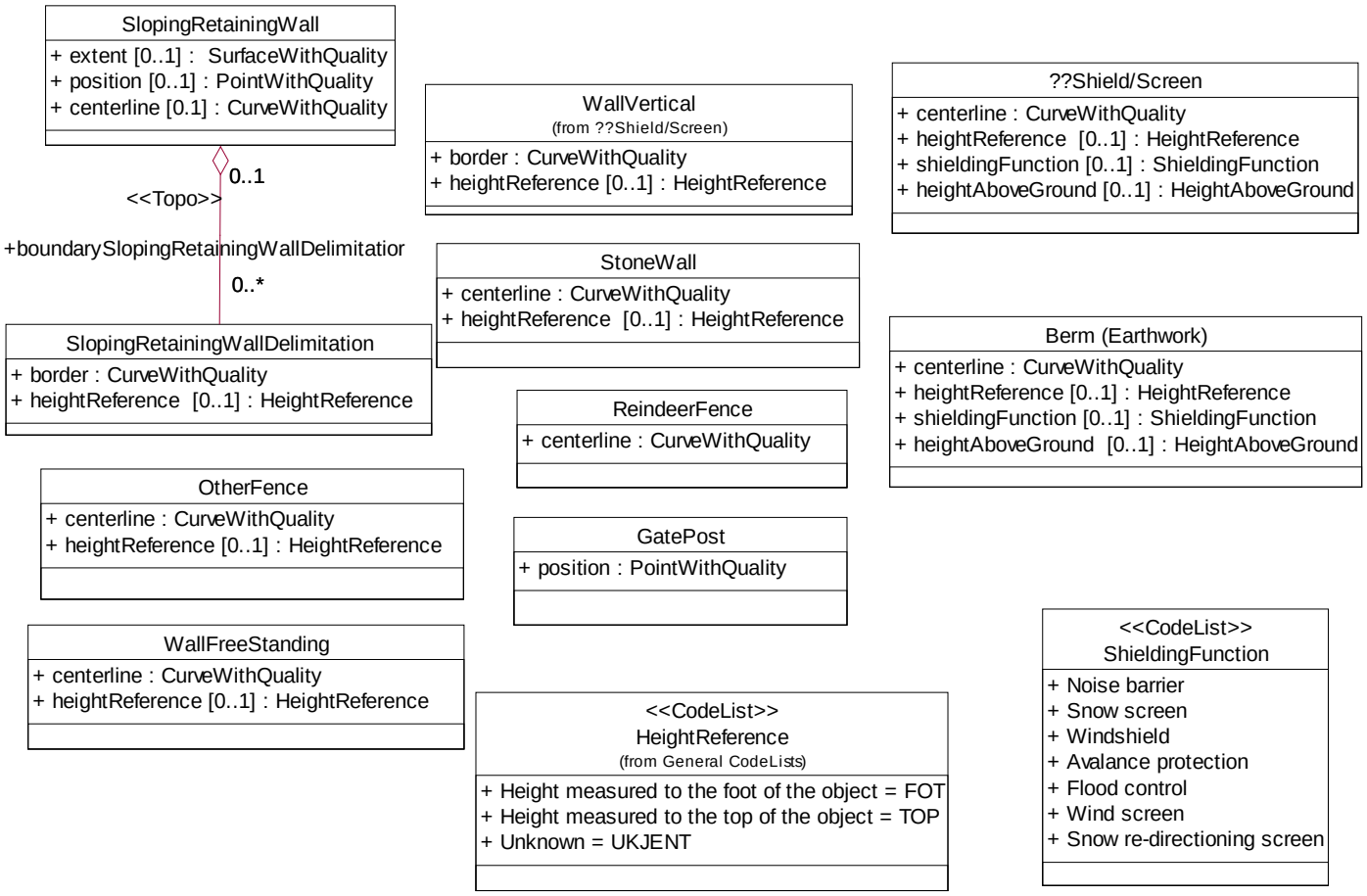
TechnicalConstructionsWaterWatercourseCoast – Part 2
TechnicalConstructionsWaterWatercourseCoast



TechnicalConstructionsWaterWatercourseCoast – WaterSupply



Walls and fences



1.2 Description

1.2.1 Brigdes and tunnels

1.2.1.1 Bridge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class Bridge	construction for crossing of area which is difficult to traverse				
1.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
1.2	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
1.3	position	location where the object exists	0	1	PointWithQuality	
1.4	bridgeName	the name of the bridge	0	1	Name	
1.5	typeOfBridgeDesign	the bridge's design	0	1	TypeOfBridgeDesign	
1.6	bridgeMaterial	the material from which the bridge is constructed	0	1	BridgeMaterial	
1.7	bridgeOpeningMethod	the way the bridge can be opened	0	1	BridgeOpeningWay	
1.8	bridgeTrafficType		0	N	BridgeTrafficType	
1.9	bridgeOwner	owner of the bridge	0	1	CharacterString	
1.10	minimumVerticalClearance	minimum sailing height under a bridge, overhead ??line/cable, etc. from a given reference level Note: From 1 January 2000, the Highest Astronomical Tide (HAT) will be the reference level for minimum vertical clearance [The Norwegian Mapping Authority, H	0	1	Real	
1.11	sailingWidth	estimated sailing width Note: Indication of minimum width in metres with 1 decimal	0	1	Real	
1.12	sailingDepth	estimated sailing depth (indication of depth in metres with 1 decimal)	0	1	Real	
1.13	bridgeOverBridge	indication of whether the bridge is situated above one or more other bridges	0	1	Boolean	
1.14	Role boundaryBridge		0	N	BridgeDelimitation	Aggregration
1.1	Role		0	N	BridgeDetail	Aggregrati

5	detail					on

1.2.1.2 BridgeDelimitation

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

1.2.1.3 TunnelPortal

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class TunnelPortal	special structure which connects open road and tunnel				
3.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.1.4 Aquaduct

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Class Aquaduct	system for transportation of water or other fluids built up above terrain with a ??(structure resembling a bridge / bridge-like foundation)				
4.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.1.5 Culvert

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class Culvert	passage crossing underneath a road or railway with overlying earthfill and 1 m < clear opening < 2.5 m				
5.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.1.6 Subdrain/culvert

No	Name/	Description	Obligation/	Maximum	Type	Constraint

	Role name		Condition	Occurrence		
6	Class Subdrain/culvert	passage crossing underneath a road or railway with overlying earthfill and 1m > clear opening				
6.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.1.7 BridgeDetail

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
7	Class BridgeDetail	marked details on a bridge which are not registered through other object types				
7.1	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
7.2	position	location where the object exists	0	1	PointWithQuality	
7.3	Role (unnamed) Bridge		1	1	Bridge	

1.2.1.8 Association <<Topo>> Bridge -BridgeDelimitation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
8	Association Bridge - BridgeDelimitation					
8.1	Role boundaryBridge		0	N	BridgeDelimitation	Aggregation
8.2	Role (unnamed) Bridge		1	1	Bridge	

1.2.1.9 Association Bridge -BridgeDetail

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Association Bridge - BridgeDetail					
9.1	Role detail		0	N	BridgeDetail	Aggregation
9.2	Role (unnamed) Bridge		1	1	Bridge	

1.2.1.10 CodeLists

1.2.1.10.1 <<CodeList>> TypeOfBridgeDesign

Nr	Code name	Definition/Description	Code
1	CodeList TypeOfBridgeDesign	different bridge design types	
1.1	Pontoon bridge		
1.2	Girder bridge		
1.3	Arched/vaulted bridge		
1.4	Truss bridge		
1.5	Slab bridge		
1.6	Frame bridge		
1.7	Suspension bridge		

1.2.1.10.2 <<CodeList>> BridgeMaterial

Nr	Code name	Definition/Description	Code
2	CodeList BridgeMaterial	different types of materials that of which a bridge may consist	
2.1	Concrete		
2.2	Rock		
2.3	Steel		
2.4	Wood		

1.2.1.10.3 <<CodeList>> BridgeOpeningWay

Nr	Code name	Definition/Description	Code
3	CodeList BridgeOpeningWay	specification of the ways a bridge can be opened	
3.1	Fixed bridge		
3.2	Swing bridge		
3.3	Lift bridge		
3.4	Bascule bridge/draw bridge		
3.5	Roller bridge		

1.2.1.10.4 <<CodeList>> BridgeTrafficType

Nr	Code name	Definition/Description	Code
4	CodeList BridgeTrafficType	different types of traffic for which a bridge is built	
4.1	Road		
4.2	Railway		
4.3	Game crossing		
4.4	Pedestrian/bicycle path		
4.5	Aqueduct	bru som fører vannledning over en dal el. i en viss høyde over bakken	

1.2.2 Constructions – Package1

1.2.2.1 StoneMonument

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class StoneMonument	a monumental stone of some sort				
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	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	
1.4	Role boundaryStoneMonument		0	N	StoneMonumentBoundary	Aggregration

1.2.2.2 PetrolPump

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class PetrolPump	pump device for filling of fuel				
2.1	position	location where the object exists	1	1	PointWithQuality	
2.2	heightReference		0	1	HeightReference	

1.2.2.3 StoneMonumentBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class StoneMonumentBoundary	delimitation of stone monument				
3.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
3.2	Role (unnamed) StoneMonument		1	1	StoneMonument	

1.2.2.4 Well

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrenc	Type	Constraint

				e		
4	Class Well	small building-related facility for freshwater tapping				
4.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
4.2	position	location where the object exists	0	1	PointWithQuality	
4.3	Role boundaryWell		0	N	WellBoundary	Aggregration

1.2.2.5 WellBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class WellBoundary	delimitation of well				
5.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
5.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	
5.3	Role (unnamed) Well		1	1	Well	

1.2.2.6 ConstructionPit

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
6	Class ConstructionPit	construction site where excavation has taken place, for the purpose of erecting a new building-related construction				
6.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
6.2	position	location where the object exists	0	1	PointWithQuality	
6.3	Role boundaryConstructionPit		0	N	ConstructionPitBoundary	Aggregration

1.2.2.7 ConstructionPitBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
7	Class ConstructionPitBoundary	outer edge of excavated pit				
7.1	border	course following the	1	1	CurveWithQual	

		transition between different real world phenomena			ity	
7.2	Role (unnamed) ConstructionPit		1	1	ConstructionPit	

1.2.2.8 FlagPole

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
8	Class FlagPole	long, straight pole for hoisting flags				
8.1	position	location where the object exists	1	1	PointWithQuality	
8.2	heightReference		0	1	HeightReference	

1.2.2.9 Fountain

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Class Fountain	building-related construction with through-flow of water				
9.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
9.2	position	location where the object exists	0	1	PointWithQuality	
9.3	fountainType		1	1	FountainType	
9.4	Role boundaryFountain		0	N	FountainBdry	Aggregration

1.2.2.10 FountainBdry

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
10	Class FountainBdry	delimitation of fountain				
10.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
10.2	Role (unnamed) Fountain		1	1	Fountain	

1.2.2.11 FreeStandingStairs

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
11	Class FreeStandingStai	staircase not connected to a building				

	rs					
11.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
11.2	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
11.3	position	location where the object exists	0	1	PointWithQuality	
11.4	Role boundaryFreeStandingStairsEgde		0	N	FreeStandingStairsEdge	Aggregration

1.2.2.12 FreeStandingStairsEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
12	Class FreeStandingStairsEdge	delimitation of freestanding staircases				
12.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
12.2	Role (unnamed) FreeStandingStairs		1	1	FreeStandingStairs	

1.2.2.13 Foundation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
13	Class Foundation	cast foundation for freestanding structures				
13.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
13.2	position	location where the object exists	0	1	PointWithQuality	
13.3	Role boundaryFoundationEdge		0	N	FoundationEdge	Aggregration

1.2.2.14 FoundationEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
14	Class FoundationEdge	delimitation of foundation				
14.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
14.2	heightReference		0	1	HeightReference	
14.	Role		1	1	Foundation	

3	(unnamed) Foundation					

1.2.2.15 EnergyWell

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
15	Class EnergyWell	well of a diameter of approx. 14 cm located in soil or bedrock. Note: Borehole may be located in a manhole. Hoses have been inserted into the hole to retreive surplus heat for the heat pump. This is usually located indoors.				
15.1	position	location where the object exists	1	1	PointWithQuality	

1.2.2.16 Windmill

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
16	Class Windmill	originally a mill for grinding grain, driven by means of blades on a rotating axle. Today the word is also used to refer to wind turbines for production of electricity and to pump water				
16.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
16.2	position	location where the object exists	0	1	PointWithQuality	
16.3	heightToHub	height to the windmill's hub	0	1	Integer	
16.4	heightAboveGround	total height above the ground	0	1	HeightAboveGround	
16.5	installedEffect	the output of the windmill in the form of kW (kilowatt)	0	1	Integer	
16.6	Role boundaryWindmil		0	N	WindmillDelimitation	Aggregration

1.2.2.17 WindmillDelimitation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
17	Class WindmillDelimitation	delimitation of the outer edge of the windmill				
17.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
17.	Role		1	1	Windmill	

2	(unnamed) Windmill					

1.2.2.18 Association <<Topo>> StoneMonument-StoneMonumentBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
18	Association StoneMonument-StoneMonumentBoundary					
18.1	Role boundaryStoneMonument		0	N	StoneMonumentBoundary	Aggregation
18.2	Role (unnamed) StoneMonument		1	1	StoneMonument	

1.2.2.19 Association <<Topo>> Well-WellBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
19	Association Well-WellBoundary					
19.1	Role boundaryWell		0	N	WellBoundary	Aggregation
19.2	Role (unnamed) Well		1	1	Well	

1.2.2.20 Association <<Topo>> ConstructionPit-ConstructionPitBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
20	Association ConstructionPit-ConstructionPitBoundary					
20.1	Role boundaryConstructionPit		0	N	ConstructionPitBoundary	Aggregation
20.2	Role (unnamed) ConstructionPit		1	1	ConstructionPit	

1.2.2.21 Association <<Topo>> Foundation-FoundationEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
21	Association Foundation-FoundationEdge					
21.	Role		0	N	FoundationEdg	Aggregatio

1	boundaryFoundationEdge				e	n
21.2	Role (unnamed) Foundation		1	1	Foundation	

1.2.2.22 Association <<Topo>> FreeStandingStairs-FreeStandingStairsEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
22	Association FreeStandingStairs-FreeStandingStairsEdge					
22.1	Role boundaryFreeStandingStairsEgde		0	N	FreeStandingStairsEdge	Aggregation
22.2	Role (unnamed) FreeStandingStairs		1	1	FreeStandingStairs	

1.2.2.23 Association <<Topo>> Fountain-FountainBdry

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
23	Association Fountain-FountainBdry					
23.1	Role boundaryFountain		0	N	FountainBdry	Aggregation
23.2	Role (unnamed) Fountain		1	1	Fountain	

1.2.2.24 Association <<Topo>> Windmill-WindmillDelimitation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
24	Association Windmill-WindmillDelimitation					
24.1	Role boundaryWindmil		0	N	WindmillDelimitation	Aggregation
24.2	Role (unnamed) Windmill		1	1	Windmill	

1.2.2.25 CodeLists

1.2.2.25.1 <<CodeList>> FountainType

Nr	Code name	Definition/Description	Code
1	CodeList FountainType	description of the type of fountain	
	??Drinking/Potable water		1

1.2.3 Constructions - Package2

1.2.3.1 Tombstone

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class Tombstone	tombstone on a deceased person's grave showing who is buried there				
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	Role boundaryTombstone		0	N	TombstoneBoundary	Aggregration

1.2.3.2 TombstoneBoundary

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

1.2.3.3 SewageTreatmentPlant

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class SewageTreatmentPlant	outdoor facility for treatment of sewage				
3.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
3.2	position	location where the object exists	0	1	PointWithQuality	
3.3	Role boundarySewageTreatmentPlant		0	N	SewageTreatmentPlantBoundary	Aggregration

1.2.3.4 SewageTreatmentPlantBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrenc	Type	Constraint

				e		
4	Class SewageTreatmentPlantBoundary	delimitation of sewage treatment plant				
4.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
4.2	heightReference		0	1	HeightReference	
4.3	Role (unnamed) SewageTreatmentPlant		0	1	SewageTreatmentPlant	

1.2.3.5 Chimney

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class Chimney	free-standing tubular facility for transportation of exhaust gases				
5.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
5.2	position	location where the object exists	0	1	PointWithQuality	
5.3	Role boundaryChimneyEdge		0	N	ChimneyEdge	Aggregration

1.2.3.6 ChimneyEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
6	Class ChimneyEdge	delimitation of chimney				
6.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
6.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	
6.3	Role (unnamed) Chimney		1	1	Chimney	

1.2.3.7 LetterBoxRack

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
7	Class	rack for mounting of letter				

	LetterBoxRack	boxes				
7.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
7.2	position	location where the object exists	0	1	PointWithQuality	
7.3	Role boundaryLetterBoxRack		0	N	LetterBoxRackBoundary	Aggregration

1.2.3.8 LetterBoxRackBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
8	Class LetterBoxRackBoundary	delimitation of letter box rack				
8.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
8.2	Role (unnamed) LetterBoxRack		1	1	LetterBoxRack	

1.2.3.9 Silo

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Class Silo	storage building for fodder and grain not registered as a building in GAB				
9.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
9.2	position	location where the object exists	0	1	PointWithQuality	
9.3	Role boundarySiloEdge		0	N	SiloEdge	Aggregration

1.2.3.10 SiloEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
10	Class SiloEdge	delimitation of silo				
10.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
10.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

10.3	Role (unnamed) Silo		1	1	Silo	

1.2.3.11 GreasingRamp

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
11	Class GreasingRamp	facility for vehicle maintenance				
11.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
11.2	heightReference		0	1	HeightReference	

1.2.3.12 Tank/vessel

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
12	Class Tank/vessel	closed tank/vessel for storage of gas or fluids which is not registered as building				
12.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
12.2	position	location where the object exists	0	1	PointWithQuality	
12.3	Role boundaryTank/VesselEdge		0	N	Tank/VesselEdge	Aggregration

1.2.3.13 Tank/VesselEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
13	Class Tank/VesselEdge	delimitation of tank/vessel				
13.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
13.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	
13.3	Role (unnamed) Tank/vessel		1	1	Tank/vessel	

1.2.3.14 Tower

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint

14	Class Tower	Tall building structure in which the height is great in relation to the footprint of the building				
14.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
14.2	position	location where the object exists	0	1	PointWithQuality	
14.3	Role boundaryTowerEdge		0	N	TowerEdge	Aggregration

1.2.3.15 TowerEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
15	Class TowerEdge	delimitation of tower				
15.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
15.2	heightReference	angivelse av om registreringen er utført på topp eller bunn av et element- f.eks. en skråning- mur osv.	0	1	HeightReference	
15.3	Role (unnamed) Tower		1	1	Tower	

1.2.3.16 Association <<Topo>> Tombstone-TombstoneBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
16	Association Tombstone-TombstoneBoundary					
16.1	Role boundaryTombstone		0	N	TombstoneBoundary	Aggregation
16.2	Role (unnamed) Tombstone		1	1	Tombstone	

1.2.3.17 Association <<Topo>> Tower-TowerEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
17	Association Tower-TowerEdge					
17.	Role		0	N	TowerEdge	Aggregatio

1	boundaryTowerEdge					n
17.2	Role (unnamed) Tower		1	1	Tower	

1.2.3.18 Association <<Topo>> Tank/vessel-Tank/VesselEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
18	Association Tank/vessel-Tank/VesselEdge					
18.1	Role boundaryTank/VesselEdge		0	N	Tank/VesselEdge	Aggregation
18.2	Role (unnamed) Tank/vessel		1	1	Tank/vessel	

1.2.3.19 Association <<Topo>> Chimney-ChimneyEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
19	Association Chimney-ChimneyEdge					
19.1	Role boundaryChimneyEdge		0	N	ChimneyEdge	Aggregation
19.2	Role (unnamed) Chimney		1	1	Chimney	

1.2.3.20 Association <<Topo>> Silo-SiloEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
20	Association Silo-SiloEdge					
20.1	Role boundarySiloEdge		0	N	SiloEdge	Aggregation
20.2	Role (unnamed) Silo		1	1	Silo	

1.2.3.21 Association <<Topo>> LetterBoxRack-LetterBoxRackBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
21	Association LetterBoxRack-LetterBoxRackBo					

	undary					
21.1	Role boundaryLetterBoxRack		0	N	LetterBoxRackBoundary	Aggregation
21.2	Role (unnamed) LetterBoxRack		1	1	LetterBoxRack	

1.2.3.22 Association <<Topo>> SewageTreatmentPlant-SewageTreatmentPlantBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
22	Association SewageTreatmentPlant-SewageTreatmentPlantBoundary					
22.1	Role boundarySewageTreatmentPlant		0	N	SewageTreatmentPlantBoundary	Aggregation
22.2	Role (unnamed) SewageTreatmentPlant		0	1	SewageTreatmentPlant	

1.2.4 TechinicaConstructionCulturePlayEtc.

1.2.4.1 GondolaCable

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class GondolaCable	cableway where the cargo is located in closed compartments				Subtype of Cableway

1.2.4.2 SkiJump

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class SkiJump	facility for ski jumping with artificial or natural approach				
2.1	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
2.2	position	location where the object exists	0	1	PointWithQuality	
2.3	heightReference	angivelse av om registreringen er utført på topp eller bunn av et element- f.eks. en	0	1	HeightReference	

		skråning- mur osv.				

1.2.4.3 SportsFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class SportsFacility	line for delimitation of constructed parts of sports facility, such as outer delimitation of a football pitch				
3.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
3.2	heightReference	angivelse av om registreringen er utført på topp eller bunn av et element- f.eks. en skråning- mur osv.	0	1	HeightReference	

1.2.4.4 PlayApparatus

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Class PlayApparatus	outline of building-technical facility designed for other types of playing, swinging and climbing in childrenXzXs play areas				
4.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.4.5 SandPit

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class SandPit	pit filled with sand, particularly for young children to play in				
5.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.4.6 SkiTow

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
6	Class SkiTow	cableway for pulling skiers up steep slopes				Subtype of Cableway

1.2.4.7 ShootingRangeFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint

7	Class ShootingRangeFacility	outline of technical facilities at shooting range - stands and targets that are not registered as building or walls				
7.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
7.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

1.2.4.8 ChairLift

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
8	Class ChairLift	cableway with chairs for passenger transport				Subtype of Cableway

1.2.4.9 SwimmingPool

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Class SwimmingPool	pool for swimming and water play				
9.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
9.2	position	location where the object exists	0	1	PointWithQuality	
9.3	Role boundarySwimmingPoolEdge		0	N	SwimmingPoolEdge	Aggregration

1.2.4.10 SwimmingPoolEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
10	Class SwimmingPoolEdge	delimitation of swimming pool (the edge of the pool)				
10.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
10.2	Role (unnamed) SwimmingPool		1	1	SwimmingPool	

1.2.4.11 Cableway

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
11	Class	facility where ropes or				

	Cableway	cables carry and/or pull cargo over some distance				
11.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
11.2	heightReference		0	1	HeightReference	

1.2.4.12 Grandstand

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
12	Class Grandstand	facility built up of metal, rock, masonry or wood for the use of the audience at cultural arenas, particularly sports facilities				
12.1	extente	area over which an object extends	0	1	SurfaceWithQuality	
12.2	position	location where the object exists	0	1	PointWithQuality	
12.3	Role boundaryGrandstandEdge		0	N	GrandstandEdge	Aggregration

1.2.4.13 GrandstandEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
13	Class GrandstandEdge	delimitation of grandstand				
13.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
13.2	heightReference		0	1	HeightReference	
13.3	Role (unnamed) Grandstand		1	1	Grandstand	

1.2.4.14 SkiJumpFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
14	Class SkiJumpFacility	outline of ramp and jump.				
14.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.4.15 Association <<Topo>> Grandstand -GrandstandEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
15	Association					

	Grandstand - GrandstandEdge					
15.1	Role boundaryGrandstandEdge		0	N	GrandstandEdge	Aggregation
15.2	Role (unnamed) Grandstand		1	1	Grandstand	

1.2.4.16 Association <<Topo>> SwimmingPool-SwimmingPoolEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
16	Association SwimmingPool-SwimmingPoolEdge					
16.1	Role boundarySwimmingPoolEdge		0	N	SwimmingPoolEdge	Aggregation
16.2	Role (unnamed) SwimmingPool		1	1	SwimmingPool	

1.2.5 TechinicalConstructionWaterWatercourseCoast – Part 1

1.2.5.1 DescriptiveConstructionLineFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class DescriptiveConstructionLineFacility	characteristic lines on building-related and technical facilities				
1.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
1.2	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	
1.3	Role (unnamed) Mole		0	N	Mole	
1.4	Role (unnamed) Dike		1	1	Dike	
1.5	Role (unnamed) Dam		1	1	Dam	
1.6	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	

1.2.5.2 BuildingRelatedFacilityWater

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class BuildingRelatedFacilityWater	descriptive line for building-related facility by the sea or a watercourse, unspecified				
2.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.5.3 Breakwater

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class Breakwater	construction protecting a coastal area, a harbour/harbour basin or anchorages against waves				
3.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.5.4 Dam

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Class Dam	construction for elevating the water surface and creating an artifical water reservoir as well as regulating the flow of water				
4.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
4.2	position	location where the object exists	0	1	PointWithQuality	
4.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
4.4	damFunction	indication of how the dam regulates the water	0	1	DamFunction	
4.5	damType	the construction material of the dam	0	1	DamType	
4.6	damPurpose	what the purpose of the dam is meant to be	0	1	DamPurpose	
4.7	damLength	total length of the dam in metres	0	1	Real	
4.8	Role boundaryDamEdge		0	N	DamEdge	Aggregration
4.9	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregration
4.10	Role toppKantDam		0	N	DescriptiveConstructionLineFacility	Aggregration

1.2.5.5 DamEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class DamEdge	delimitation of the dam against the terrain				
5.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
5.2	Role (unnamed) Dam		1	1	Dam	

1.2.5.6 Dike

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
6	Class Dike	construction which is to prevent an uncontrolled flow of water from the sea				
6.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
6.2	position	location where the object exists	0	1	PointWithQuality	
6.3	Role toppKantDike		0	N	DescriptiveConstructionLineFacility	Aggregration
6.4	Role boundary		0	N	DikeEdge	Aggregration

1.2.5.7 DikeEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
7	Class DikeEdge	delimitation of dike				
7.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
7.2	Role (unnamed) Dike		1	1	Dike	

1.2.5.8 RiverEmbankment

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
8	Class RiverEmbankment	construction in or along watercourses to prevent erosion or flood, or as an environmental measure				
8.1	extent	area over which an object extends	0	1	SurfaceWithQuality	

8.2	position	location where the object exists	0	1	PointWithQuality	
8.3	Role toppKantElveforbygning		1	1	DescriptiveConstructionLineFacility	
8.4	Role boundaryRiverEmbankmentEdge		0	N	RiverEmbankmentEdge	Aggregration
8.5	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregration
8.6	Role toppKantElveforbygning		0	N	DescriptiveConstructionLineFacility	Aggregration

1.2.5.9 RiverEmbankmentEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Class RiverEmbankmentEdge	delimitation of river embankment				
9.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
9.2	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	

1.2.5.10 RiverThreshold

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
10	Class RiverThreshold	artificial building-up in rivers to make/raise?? the water level in river courses				
10.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
10.2	position	location where the object exists	0	1	PointWithQuality	
10.3	thresholdFunction	what function the threshold has (threshold, measuring threshold).	0	1	ThresholdFunction	
10.4	thresholdType	construction material of the threshold	0	1	ThresholdType	
10.5	Role boundaryRiverThresholdEgde		0	N	RiverThresholdEdge	
10.6	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregration

1.2.5.11 RiverThresholdEdge

No	Name/	Description	Obligation/	Maximum	Type	Constraint

	Role name		Condition	Occurrence		
11	Class RiverThresholdEdge	delimitation of river threshold				
11.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
11.2	Role (unnamed) RiverThreshold		1	1	RiverThreshold	

1.2.5.12 FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
12	Class FictiousDelimitationForFacility	fictitious delimitation line for facility				
12.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
12.2	Role (unnamed) Dam		1	1	Dam	
12.3	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	
12.4	Role (unnamed) RiverThreshold		1	1	RiverThreshold	
12.5	Role (unnamed) Mole		0	N	Mole	
12.6	Role (unnamed) Pier		0	N	Pier	
12.7	Role (unnamed) QuayWharf		1	1	QuayWharf	

1.2.5.13 DryingRackForFish

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
13	Class DryingRackForFish	device for drying fish				
13.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
13.2	position	location where the object exists	0	1	PointWithQuality	
13.3	Role boundaryDryingR		0	N	DryingRackBoundary	Aggregration

	ack					
13.4	Role topRidge		0	N	FishDryingRackRidgepole	

1.2.5.14 DryingRackBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
14	Class DryingRackBoundary	delimitation of drying rack for fish				
14.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
14.2	Role (unnamed) DryingRackForFish		1	1	DryingRackForFish	

1.2.5.15 FishDryingRackRidgepole

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
15	Class FishDryingRackRidgepole	the top of the drying rack framework				
15.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
15.2	Role (unnamed) DryingRackForFish		1	1	DryingRackForFish	

1.2.5.16 FishLadder

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
16	Class FishLadder	facility in rivers allowing fish to migrate upstream				
16.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.5.17 FloatingStage

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
17	Class FloatingStage	wharf chained to the bottom and whose location may depend on the direction of the wind and current				
17.1	extent	area over which an object extends	0	1	SurfaceWithQuality	

17.2	position	location where the object exists	0	1	PointWithQuality	
17.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
17.4	Role boundaryFloatingStageEdge		0	N	FloatingStageEdge	Aggregration

1.2.5.18 FloatingStageEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
18	Class FloatingStageEdge	delimitation of floating stage				
18.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
18.2	Role (unnamed) FloatingStage		1	1	FloatingStage	

1.2.5.19 Association <<Topo>> Dam-DamEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
19	Association Dam-DamEdge					
19.1	Role boundaryDamEdge		0	N	DamEdge	Aggregation
19.2	Role (unnamed) Dam		1	1	Dam	

1.2.5.20 Association <<Topo>> RiverThreshold-RiverThresholdEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
20	Association RiverThreshold-RiverThresholdEdge					
20.1	Role boundaryRiverThresholdEgde		0	N	RiverThresholdEdge	
20.2	Role (unnamed) RiverThreshold		1	1	RiverThreshold	

1.2.5.21 Association <<Topo>> Dike-DikeEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint

21	Association Dike-DikeEdge					
21.1	Role boundary		0	N	DikeEdge	Aggregation
21.2	Role (unnamed) Dike		1	1	Dike	

1.2.5.22 Association <<Topo>> FloatingStage-FloatingStageEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
22	Association FloatingStage-FloatingStageEdge					
22.1	Role boundaryFloatingStageEdge		0	N	FloatingStageEdge	Aggregation
22.2	Role (unnamed) FloatingStage		1	1	FloatingStage	

1.2.5.23 Association <<Topo>> RiverEmbankment-RiverEmbankmentEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
23	Association RiverEmbankment-RiverEmbankmentEdge					
23.1	Role boundaryRiverEmbankmentEdge		0	N	RiverEmbankmentEdge	Aggregation
23.2	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	

1.2.5.24 Association <<Topo>> DryingRackForFish-DryingRackBoundary

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
24	Association DryingRackForFish-DryingRackBoundary					
24.1	Role boundaryDryingRack		0	N	DryingRackBoundary	Aggregation
24.2	Role (unnamed)		1	1	DryingRackForFish	

	DryingRackForFish					

1.2.5.25 Association <<Topo>> Dam-FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
25	Association Dam-FictiousDelimitationForFacility					
25.1	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregation
25.2	Role (unnamed) Dam		1	1	Dam	

1.2.5.26 Association <<Topo>> RiverEmbankment-FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
26	Association RiverEmbankment-FictiousDelimitationForFacility					
26.1	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregation
26.2	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	

1.2.5.27 Association <<Topo>> WaterSupplyFacility-WaterSupplyFacilityEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
27	Association WaterSupplyFacility-WaterSupplyFacilityEdge					
27.1	Role boundaryWaterSupplyFacilityEdge		0	N	WaterSupplyFacilityEdge	Aggregation
27.2	Role (unnamed) WaterSupplyFacility		1	1	WaterSupplyFacility	

1.2.5.28 Association <<Topo>> FloatingDock-FloatingDockEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
28	Association FloatingDock-FloatingDockEdge					
28.1	Role boundaryFloatingDockEdge		0	N	FloatingDockEdge	Aggregation
28.2	Role (unnamed) FloatingDock		1	1	FloatingDock	

1.2.5.29 Association Dam-DescriptiveConstructionLineFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
29	Association Dam-DescriptiveConstructionLineFacility					
29.1	Role toppKantDam		0	N	DescriptiveConstructionLineFacility	Aggregation
29.2	Role (unnamed) Dam		1	1	Dam	

1.2.5.30 Association DryingRackForFish-FishDryingRackRidgepole

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
30	Association DryingRackForFish-FishDryingRackRidgepole					
30.1	Role topRidge		0	N	FishDryingRackRidgepole	
30.2	Role (unnamed) DryingRackForFish		1	1	DryingRackForFish	

1.2.5.31 Association RiverThreshold-FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
31	Association RiverThreshold-FictiousDelimitati					

	onForFacility					
31.1	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregation
31.2	Role (unnamed) RiverThreshold		1	1	RiverThreshold	

1.2.5.32 Association RiverEmbankment-DescriptiveConstructionLineFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
32	Association RiverEmbankment-DescriptiveConstructionLineFacility					
32.1	Role toppKantElveforbygning		0	N	DescriptiveConstructionLineFacility	Aggregation
32.2	Role (unnamed) RiverEmbankment		1	1	RiverEmbankment	

1.2.5.33 CodeLists

1.2.5.33.1 <<CodeList>> DamPurpose

Nr	Code name	Definition/Description	Code
1	CodeList DamPurpose	what the purpose of the dam is meant to be	
1.1	Other		AN
1.2	Dike - dam		DI
1.3	Fish pond		FI
1.4	Flood alleviation dam		FL
1.5	Soil irrigation dam		JO
1.6	Energy production		KR
1.7	Backwater dam/catchment basin		OS
1.8	Recreation dam		RE
1.9	Sedimentation dam		SE
1.10	Timber floating dam		TD
1.11	Water supply dam		VA

1.2.5.33.2 <<CodeList>> ThresholdFunction

Nr	Code name	Definition/Description	Code
2	CodeList ThresholdFunction	what function the threshold has (threshold, measuring threshold).	
2.1	Threshold	conditions for riverine flora/fauna and recreation due to a reduction in the natrual water flow.	T
2.2	Measuring threshold	Measuring weir for water flow with measured-in profile	M

1.2.5.33.3 <<CodeList>> ThresholdType

Nr	Code name	Definition/Description	Code
3	CodeList ThresholdType	the construction material of the threshold	
3.1	Threshold built of soil	Terskel konstruert med løsmasser	L
3.2	Threshold built with plates??	Terskel konstruert med plater	P
3.3	Threshold built with timber	Terskel konstruert med tømmer	T
3.4	Threshold built with rubber	terskel konstruert med gummi	G

1.2.5.33.4 <<CodeList>> DamFunction

Nr	Code name	Definition/Description	Code
4	CodeList DamFunction	specification of how the dam regulates the water	
4.1	Dam for the purpose of transferring water from one watercourse to another		1
4.2	Dam with overflow/passage		2
4.3	Dam without overflow/passage		3

1.2.5.33.5 <<CodeList>> DamType

Nr	Code name	Definition/Description	Code
5	CodeList DamType	construction materials for the dam	
5.1	Dam constructed using concrete		Betongdam
5.2	Dam constructed using filling material		Fyllingsdam
5.3	Dam constructed using plates??r		Platedam

1.2.6 TechnicalConstructionsWaterWatercourseCoast – Part 2

1.2.6.1 ??Rafting/FloatingChannel

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class ??Rafting/FloatingChannel	installation constructed to transport timber to a processing facility				
1.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.6.2 Mooring bollard/dolphin

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class Mooring bollard/dolphin	special facility for mooring of boats				
2.1	position	location where the object exists	1	1	PointWithQuality	

1.2.6.3 QuayWharf

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class QuayWharf	indication of facilities set up to serve boats during loading, unloading and docking				
3.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
3.2	position	location where the object exists	0	1	PointWithQuality	
3.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
3.4	quayInformation	information about a quay or jetty facility	0	1	QuayInformation	
3.5	Role boundaryQuayWharfEdge		0	N	QuayWharfEdge	Aggregration
3.6	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregration

1.2.6.4 QuayWharfEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Class QuayWharfEdge	delimitation of quay/wharf				

4.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
4.2	Role (unnamed) QuayWharf		1	1	QuayWharf	

1.2.6.5 Mole

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class Mole	artificial or natural structure which reduces or eliminates waves in the sea				
5.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
5.2	position	location where the object exists	0	1	PointWithQuality	
5.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
5.4	Role topEdgeMole		0	N	DescriptiveConstructionLineFacility	Aggregration
5.5	Role boundaryMoleEdge		0	N	MoleEdge	
5.6	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregration

1.2.6.6 MoleEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
6	Class MoleEdge	delimitation of breakwater				
6.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
6.2	Role (unnamed) Mole		1	1	Mole	Aggregration

1.2.6.7 SmoltTank

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
7	Class SmoltTank	tank [in the sea??] for fish farming				
7.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	

7.2	position	location where the object exists	1	1	PointWithQuality	
7.3	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

1.2.6.8 ??AquacultureNetPen/FishFarmingNetCage

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
8	Class ??AquacultureNetPen/FishFarmingNetCage	net pen for farmed fish				
8.1	position	location where the object exists	0	1	PointWithQuality	
8.2	extent	area over which an object extends	0	1	SurfaceWithQuality	
8.3	Role boundary??AquaculturelNetPenEdge		0	N	??AquacultureNetPenEdge/FishFarmingNetCageEdge	Aggregration

1.2.6.9 Pier

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Class Pier	marked protruding pier, normally with water underneath, in the sea				
9.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
9.2	position	location where the object exists	0	1	PointWithQuality	
9.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
9.4	Role boundaryEdgdeOfPier		0	N	EdgeOfPier	Aggregration
9.5	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregration

1.2.6.10 EdgeOfPier

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
10	Class EdgeOfPier	delimitation of pier				
10.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	

10.2	Role (unnamed) Pier		1	1	Pier	

1.2.6.11 Dolphin

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
11	Class Dolphin	bundle of piles driven into the seafloor, in lakes or rivers to guide traffic or timber				
11.1	position	location where the object exists	1	1	PointWithQuality	

1.2.6.12 Ramp

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
12	Class Ramp	permanent sloping structure which can be used as a landing place for vessels at variable water levels				
12.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	

1.2.6.13 PipeAlley

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
13	Class PipeAlley	pipes which lead water into processing facility				
13.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
13.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

1.2.6.14 Slipway

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
14	Class Slipway	slipway where small and medium-sized vessels can be hauled up, slip Slipp brukes normalt som en linje (symboliseres som to parallelle linjer) på tvers av kystkonturen, som angir banen. Linjene stiples				

		utenfor kystkonturen for å indikere at de er under vann. I stor målestokk kan kystkonturen der banen ligger også angis som slipp.				
14.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
14.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

1.2.6.15 Sluice

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
15	Class Sluice	construction in river or channel with several lock chambers making it possible to raise or lower vessels from one water level to another				
15.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
15.2	position	location where the object exists	1	1	PointWithQuality	
15.3	sluiceType	description of the sluice type itself	0	1	SluiceType	

1.2.6.16 SheetPiling

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
16	Class SheetPiling	retaining wall or breakwater guide which guides or reduce currents in rivers or tidal waters				
16.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.6.17 CurrentBreaker

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
17	Class CurrentBreaker	low wall-like construction, sporadically underwater, which extends from the coast to protect the coast				

		or force currents into a channel, etc.				
17.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.6.18 DryDock

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
18	Class DryDock	artificial basin on land closed off by sluice gates - where the water can be pumped out so that ships which are in for overhauling stand high and dry				
18.1	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
18.2	extent	area over which an object extends	0	1	SurfaceWithQuality	
18.3	position	location where the object exists	0	1	PointWithQuality	
18.4	Role boundaryDryDockEdge		0	N	DryDockEdge	Aggregration

1.2.6.19 Wharf

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
19	Class Wharf	float-like small boat piers which are used for mooring boats and embarking/disembarking. Often designed with a number of transverse finger quays connected to a main pier				
19.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
19.2	position	location where the object exists	0	1	PointWithQuality	
19.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
19.4	Role boundaryWharfEdge		0	N	WharfEdge	

1.2.6.20 WharfEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
20	Class WharfEdge	delimitation of wharf				

20.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
20.2	Role (unnamed) Wharf		1	1	Wharf	

1.2.6.21 DryDockEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
21	Class DryDockEdge	delimitation of dry dock				
21.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
21.2	Role (unnamed) DryDock		1	1	DryDock	

1.2.6.22 <<DataType>> QuayInformation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
22	Datatype QuayInformation	information about a quay or pier facility				
22.1	quayType		1	1	QuayTypeInformation	
22.2	quayDepth		0	1	Real	
22.3	municipalityNumber		0	1	MunicipalityNumber	

1.2.6.23 FloatingDock

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
23	Class FloatingDock	floating, artificial basin closed off by sluice gates - where the water can be pumped out so that ships which are in for overhauling stand high and dry				
23.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
23.2	position	location where the object exists	0	1	PointWithQuality	
23.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
23.4	Role boundaryFloatingDockEdge		0	N	FloatingDockEdge	Aggregration

1.2.6.24 FloatingDockEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
24	Class FloatingDockEdge	delimitation of floating dock				
24.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
24.2	Role (unnamed) FloatingDock		1	1	FloatingDock	

1.2.6.25 HydroElectricPowerStation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
25	Class HydroElectricPowerStation	part of a hydro-electric facility where the generators are installed and where the actual production of electricity takes place				
25.1	position	location where the object exists	1	1	PointWithQuality	
25.2	powerPlantType		0	1	PowerPlantType	

1.2.6.26 ??AquacultureNetPenEdge/FishFarmingNetCageEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
26	Class ??AquacultureNetPenEdge/FishFarmingNetCageEdge	delimitation of fish farming net pen				
26.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
26.2	heightReference		0	1	HeightReference	
26.3	Role (unnamed) ??AquacultureNetPen/FishFarmingNetCage		1	1	??AquacultureNetPen/FishFarmingNetCage	

1.2.6.27 Association <<Topo>> Wharf-WharfEdge

No	Name/	Description	Obligation/	Maximum	Type	Constraint

	Role name		Condition	Occurrence		
27	Association Wharf-WharfEdge					
27.1	Role boundaryWharfEdge		0	N	WharfEdge	
27.2	Role (unnamed) Wharf		1	1	Wharf	

1.2.6.28 Association <<Topo>> Mole-MoleEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
28	Association Mole-MoleEdge					
28.1	Role boundaryMoleEdge		0	N	MoleEdge	
28.2	Role (unnamed) Mole		1	1	Mole	Aggregation

1.2.6.29 Association <<Topo>> QuayWharf-QuayWharfEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
29	Association QuayWharf - QuayWharfEdge					
29.1	Role boundaryQuayWharfEdge		0	N	QuayWharfEdge	Aggregation
29.2	Role (unnamed) QuayWharf		1	1	QuayWharf	

1.2.6.30 Association <<Topo>> Pier-EdgeOfPier

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
30	Association Pier-EdgeOfPier					
30.1	Role boundaryEdgdeOfPier		0	N	EdgeOfPier	Aggregation
30.2	Role (unnamed) Pier		1	1	Pier	

1.2.6.31 Association <<Topo>> Mole-FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
31	Association					

	Mole-FictiousDelimitationForFacility					
31.1	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregation
31.2	Role (unnamed) Mole		0	N	Mole	

1.2.6.32 Association <<Topo>> Pier-FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
32	Association Pier-FictiousDelimitationForFacility					
32.1	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregation
32.2	Role (unnamed) Pier		0	N	Pier	

1.2.6.33 Association <<Topo>> DryDock-DryDockEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
33	Association DryDock-DryDockEdge					
33.1	Role boundaryDryDockEdge		0	N	DryDockEdge	Aggregation
33.2	Role (unnamed) DryDock		1	1	DryDock	

1.2.6.34 Association QuayWharf-FictiousDelimitationForFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
34	Association QuayWharf-FictiousDelimitationForFacility					
34.1	Role boundaryFictious		0	N	FictiousDelimitationForFacility	Aggregation
34.2	Role (unnamed) QuayWharf		1	1	QuayWharf	

1.2.6.35 CodeLists

1.2.6.35.1 <<CodeList>> QuayTypeInformation

Nr	Code name	Definition/Description	Code
1	CodeList QuayTypeInformation	description of type of quay	
1.1	Other type		4
1.2	Concrete quay	Quay constructed from massive material	1
1.3	Floating quay	Quay or pier that floats	3
1.4	State mooring facility, Metal r.	Metal ring	5
1.5	Wooden quay	Quay constructed as a wooden platform with water under.	2

1.2.6.35.2 <<CodeList>> SluiceType

Nr	Code name	Definition/Description	Code
2	CodeList SluiceType	description of the sluice type itself	
2.1	Opening door		1
2.2	Drop door		2

1.2.6.35.3 <<CodeList>> PowerPlantType

Nr	Code name	Definition/Description	Code
3	CodeList PowerPlantType	type of power plant	
3.1	Pump		P
3.2	Hydro-electric power station		
3.3	Hydro-electric power station with pump		PK

1.2.7 WaterSupply

1.2.7.1 WaterTreatmentSystem

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class WaterTreatmentSystem	facility for treatment of water from drinking water sources before the water is distributed throughout the network				
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	facilityEmergencyPowe	information about whether a facility has emergency power	0	1	FacilityEmergencyPower	
1.4	disinfFacilityDepElectricity	indicates whether the disinfection facility is dependent on electricity	0	1	DisinfFacilityDepElectricity	
1.5	chlorineContactTimePriorToConsumption	indicates minimum contact time before the first consumer. Note: given in minutes	0	1	Integer	
1.6	pumpsEmergencyPower	information about whether pumps run on emergency power	0	1	PumpsEmergencyPower	
1.7	waterPumped	indicates whether the water is pumped to the first consumer	0	1	WaterPumped	
1.8	availableReservoirCapacity	Specifies the quantity of water for which the facility is designed, inm cubic metres per hour	0	1	Real	
1.9	otherWaterTreatmentDepElectricity	indicates whether other water treatment is dependent on electricity t	0	1	OtherWaterTreatmentDepElectricity	
1.10	startupYear	startup year	0	1	Date	
1.11	Role boundaryWaterTreatmentFacilityEdge		0	N	WaterTreatmentFacilityEdge	Aggregration

1.2.7.2 WaterSupplyFacility

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class	minor installations or major				

	WaterSupplyFacility	facilities/buildings connected to water supply network				
2.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
2.2	position	location where the object exists	0	1	PointWithQuality	
2.3	typeOfWaterSupplyFacility	angivelse av type vannforsyningsanlegg	0	1	TypeOfWaterSupplyFacility	
2.4	Role boundaryWaterSupplyFacilityEdge		0	N	WaterSupplyFacilityEdge	Aggregration

1.2.7.3 WaterSupplyFacilityEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class WaterSupplyFacilityEdge	delimitation of water supply facility				
3.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
3.2	Role (unnamed) WaterSupplyFacility		1	1	WaterSupplyFacility	

1.2.7.4 WaterTreatmentFacilityEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Class WaterTreatmentFacilityEdge	delimitation of water treatment facility				
4.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
4.2	Role (unnamed) WaterTreatmentSystem		1	1	WaterTreatmentSystem	

1.2.7.5 Association <<Topo>> WaterTreatmentSystem-WaterTreatmentFacilityEdge

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Association WaterTreatmentSystem-					

	WaterTreatmentFacilityEdge					
5.1	Role boundaryWaterTreatmentFacilityEdge		0	N	WaterTreatmentFacilityEdge	Aggregation
5.2	Role (unnamed) WaterTreatmentSystem		1	1	WaterTreatmentSystem	

1.2.7.6 CodeLists

1.2.7.6.1 <<CodeList>> FacilityEmergencyPower

Nr	Code name	Definition/Description	Code
1	CodeList FacilityEmergencyPower	information about whether a facility has emergency power	
1.1	Yes		
1.2	No		
1.3	Unknown		

1.2.7.6.2 <<CodeList>> DisinfFacilityDepElectricity

Nr	Code name	Definition/Description	Code
2	CodeList DisinfFacilityDepElectricity	indicates whether the disinfection facility is dependent on electricity	
2.1	ja		
2.2	nei		
2.3	ukjent		

1.2.7.6.3 <<CodeList>> PumpsEmergencyPower

Nr	Code name	Definition/Description	Code
3	CodeList PumpsEmergencyPower	information about whether pumps run on emergency power	
3.1	ja		
3.2	nei		
3.3	ukjent		

1.2.7.6.4 <<CodeList>> WaterPumped

Nr	Code name	Definition/Description	Code
4	CodeList WaterPumped	indicates whether the water is pumped to the first consumer	
4.1	ja		
4.2	nei		
4.3	Ukjent		

1.2.7.6.5 <<CodeList>> OtherWaterTreatmentDepElectricity

Nr	Code name	Definition/Description	Code
5	CodeList OtherWaterTreatmentDepElectricity	indication of whether other water treatment depends on electricity	
5.1	Yes		1
5.2	No		2
5.3	Unknown		3

1.2.7.6.6 <<CodeList>> TypeOfWaterSupplyFacility

Nr	Code name	Definition/Description	Code
6	CodeList TypeOfWaterSupplyFacility	specification of the type of water supply facility	
6.1	høydebasseng		1
6.2	pumpestasjon		2
6.3	reduksjonsvenstil		3
6.4	trykkøkningstank		4
6.5	avsaltningsanlegg	anlegg for avsalting av sjøvann for bruk som drikkevann	5

1.2.8 Walls and fences

1.2.8.1 OtherFence

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
1	Class OtherFence	erected barrier preventing passage				
1.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
1.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

1.2.8.2 SlopingRetainingWall

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
2	Class SlopingRetainingWall	retaining wall where the top and bottom are insignificantly displaced in relation to each other				
2.1	extent	area over which an object extends	0	1	SurfaceWithQuality	
2.2	position	location where the object exists	0	1	PointWithQuality	
2.3	centerline	course followed by the central part of the Object	0	1	CurveWithQuality	
2.4	Role boundarySlopingRetainingWallDelimitatior		0	N	SlopingRetainingWallDelimitation	Aggregration

1.2.8.3 SlopingRetainingWallDelimitation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
3	Class SlopingRetainingWallDelimitation	delimitation of sloping retaining wall				
3.1	border	course following the transition between different real world phenomena	1	1	CurveWithQuality	
3.2	heightReference		0	1	HeightReference	
3.3	Role (unnamed) SlopingRetainingWall		0	1	SlopingRetainingWall	

1.2.8.4 GatePost

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
4	Class GatePost	post that a gate can be hinged on				
4.1	position	location where the object exists	1	1	PointWithQuality	

1.2.8.5 StoneWall

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
5	Class StoneWall	permanent mass dumpsite which is not wooded and which dominates the landscape (e.g. in connection with mining or hydroelectric development)				
5.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
5.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	

1.2.8.6 WallFreeStanding

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
6	Class WallFreeStanding	wall where the backfill on one side amounts to less than half the height on the other side				
6.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
6.2	heightReference		0	1	HeightReference	

1.2.8.7 ReindeerFence

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
7	Class ReindeerFence	fence for reindeer husbandry				
7.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	

1.2.8.8 ??Shield/Screen

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrenc	Type	Constraint

				e		
8	Class ??Shield/Screen	freestanding structure which is to prevent for example the propagation of noise or snow from drifting				
8.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
8.2	heightReference	indication of whether the registration has been carried out at the top or bottom of an element, e.g. a slope, a wall, etc.	0	1	HeightReference	
8.3	shieldingFunction	which function the shield has	0	1	ShieldingFunction	
8.4	heightAboveGround	total height above the ground	0	1	HeightAboveGround	

1.2.8.9 Berm (Earthwork)

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
9	Class Berm (Earthwork)	raised terrain formation constructed to shield				
9.1	centerline	course followed by the central part of the object	1	1	CurveWithQuality	
9.2	heightReference		0	1	HeightReference	
9.3	shieldingFunction	which function the berm (earthwork) has	0	1	ShieldingFunction	
9.4	heightAboveGround	total height above the ground	0	1	HeightAboveGround	

1.2.8.10 Association <<Topo>> SlopingRetainingWall-SlopingRetainingWallDelimitation

No	Name/ Role name	Description	Obligation/ Condition	Maximum Occurrence	Type	Constraint
10	Association SlopingRetainingWall-SlopingRetainingWallDelimitation					
10.1	Role boundarySlopingRetainingWallDelimitatior		0	N	SlopingRetainingWallDelimitation	Aggregation
10.2	Role (unnamed) SlopingRetainingWall		0	1	SlopingRetainingWall	

1.2.8.11 CodeLists

1.2.8.11.1 <<CodeList>> ShieldingFunction

Nr	Code name	Definition/Description	Code
1	CodeList ShieldingFunction	various functions a shield/screen may have	
1.1	Noise barrier		
1.2	Snow screen		
1.3	Windshield		
1.4	Avalance protection		
1.5	Flood control		
1.6	Wind screen		
	Snow re-directioning screen		