



Geospatial  
Commission

National Underground Asset Register (NUAR)

NUAR Data Model Publication

## NUAR Harmonised Data Model - Feature Catalogue

### Publication History

Date	Version	Description
12/08/2024	0.1	First publication of the NUAR Data Model

### Purpose of this document

This document includes the Feature Catalogue for the logical NUAR Harmonised Data Model.

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# 1 NHDM-Logical

Package «ApplicationSchema» in package 'NUAR Harmonised Data Model'

NHDM-Logical

Version 2.1.2 Published

Created on 06/10/2023. Last modified 28/07/2024

## 1.1 NUAR Harmonised Data Model - Logical diagram

GML diagram in package 'NHDM-Logical'

NUAR Harmonised Data Model - Logical

Version 2.1.2

Created on 06/10/2023. Last modified 02/08/2024

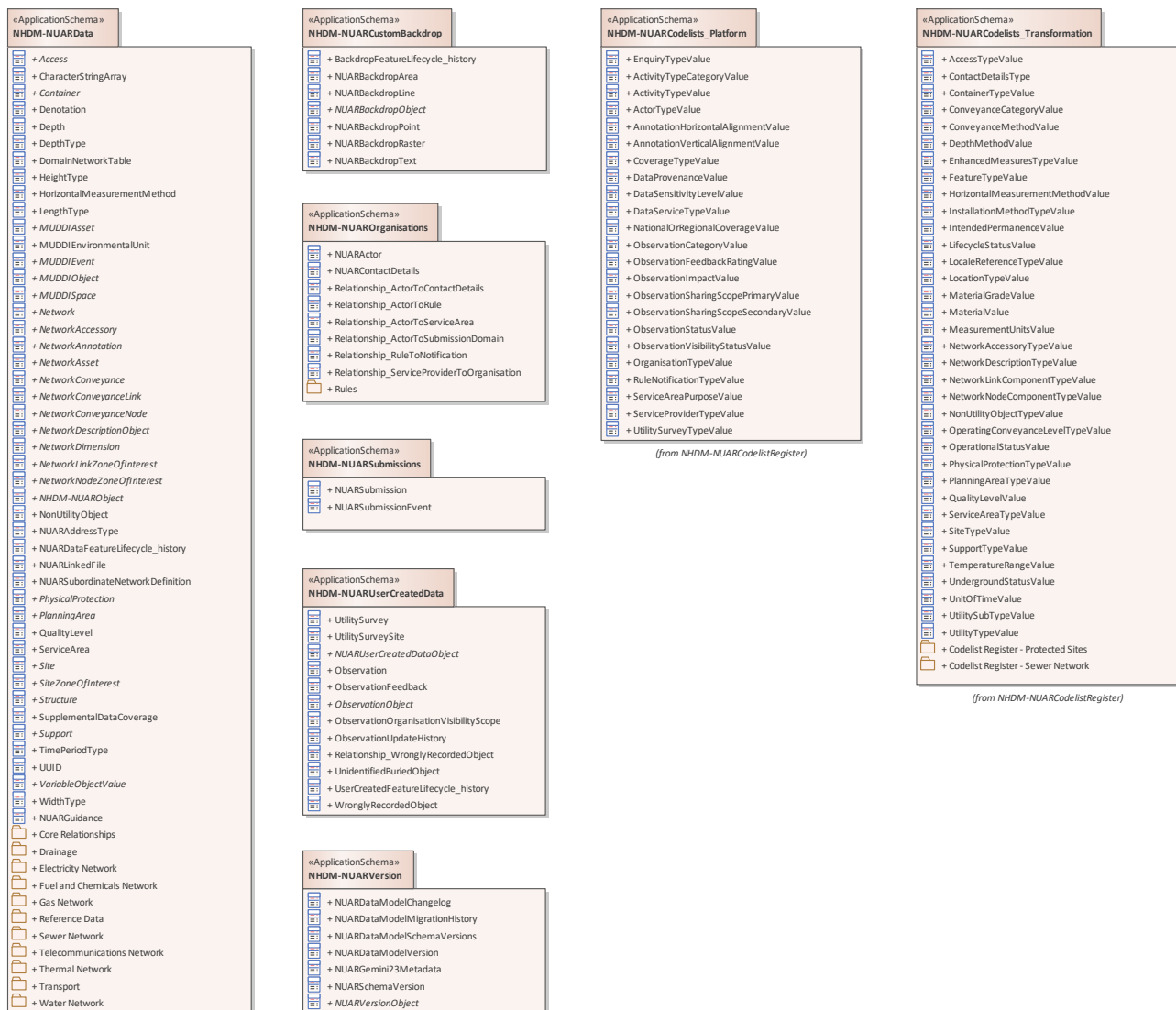


Figure 1: NUAR Harmonised Data Model - Logical

## 1.2 NHDM-NUARCodeListRegister

Package in package 'NHDM-Logical'

NHDM-NUARCodeListRegister

Version 2.1.2 Published

Created on 17/06/2024. Last modified 28/07/2024

### 1.2.1 NHDM-NUARCodeLists\_Platform

Package «ApplicationSchema» in package 'NHDM-NUARCodeListRegister'

NHDM-NUARCodeLists\_Platform

Version 2.1.2 Published

Created on 31/01/2023. Last modified 28/07/2024

#### 1.2.1.1 NUAR Harmonised Data Model - Logical - NUARCodeLists-Platform diagram

GML diagram in package 'NHDM-NUARCodeLists\_Platform'

NUAR Harmonised Data Model - Logical - NUARCodeLists-Platform

Version 2.1.2

Created on 24/11/2023. Last modified 06/08/2024



Figure 2: NUAR Harmonised Data Model - Logical - NUARCodeLists-Platform

#### 1.2.1.2 ActivityTypeCategoryValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

Created on 06/08/2024. Last modified 06/08/2024

### 1.2.1.3 ActivityTypeValue

*Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'*

#### Activity Type Codelist

A list of activities which might have a specific impact on buried assets.

*Deliberately blank*

Created on 18/08/2021. Last modified 04/08/2024




### 1.2.1.4 ActorTypeValue

*Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'*

#### Actor Type Codelist

A list of roles which an organisation or entity may fulfil with respect to the data in NUAR.

Created on 01/06/2022. Last modified 04/08/2024

ATTRIBUTES	
 Data Owner : Public	[ Is static True. Containment is Not Specified. ]
 Data Provider : Public	[ Is static True. Containment is Not Specified. ]
 Object Operator : Public	[ Is static True. Containment is Not Specified. ]
 Object Owner : Public	[ Is static True. Containment is Not Specified. ]
 Service Provider : Public	[ Is static True. Containment is Not Specified. ]
 Utility Survey Commissioner : Public	[ Is static True. Containment is Not Specified. ]
 Utility Surveyor : Public	[ Is static True. Containment is Not Specified. ]



### 1.2.1.5 AnnotationHorizontalAlignmentValue

*Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'*

#### Annotation Horizontal Alignment Codelist

A list of Horizontal Alignment options for annotation.

Created on 20/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Centre : Public	[ Is static True. Containment is Not Specified. ]
 Full : Public	[ Is static True. Containment is Not Specified. ]
 Left : Public	[ Is static True. Containment is Not Specified. ]
 Right : Public	[ Is static True. Containment is Not Specified. ]





### 1.2.1.6 AnnotationVerticalAlignmentValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Annotation Vertical Alignment Codelist

A list of Vertical Alignment options for annotation.

Created on 20/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Baseline : Public	[ Is static True. Containment is Not Specified. ]
 Bottom : Public	[ Is static True. Containment is Not Specified. ]
 Centre : Public	[ Is static True. Containment is Not Specified. ]
 Top : Public	[ Is static True. Containment is Not Specified. ]


### 1.2.1.7 CoverageTypeValue





Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Coverage Type Codelist

A list of the types of 'coverage' that may be represented in data.

Created on 14/07/2022. Last modified 04/08/2024

ATTRIBUTES	
 Area Submission Replacement Scope : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Custom Backdrop : Public	[ Is static True. Containment is Not Specified. ]
 GeoReferenced Layer : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Supplemental Data Area : Public	[ Is static True. Containment is Not Specified. ]









### 1.2.1.8 DataProvenanceValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Data Provenance CodeList

A list of the potential sources from which data may have been derived.

Created on 17/06/2024. Last modified 04/08/2024

ATTRIBUTES	
 Asset Owner Records : Public	[ Is static True. Containment is Not Specified. ]
 Contractor As-laid Drawings : Public	[ Is static True. Containment is Not Specified. ]
 Field Observation : Public	[ Is static True. Containment is Not Specified. ]
 Non-PAS128 Survey : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 PAS128 Utility Survey : Public	[ Is static True. Containment is Not Specified. ]
 Sensor Record : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.9 DataSensitivityLevelValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

**Data Sensitivity Level Codelist**

A list of levels of sensitivity which may be applied to a data item.

***Deliberately blank***

Created on 30/03/2022. Last modified 04/08/2024









**1.2.1.10 DataServiceTypeValue**

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

**Data Service Type Codelist**

A list of service types from which data may be sourced.

Created on 14/07/2022. Last modified 04/08/2024

ATTRIBUTES	
 Custom : Public	[ Is static True. Containment is Not Specified. ]
 OGC API Features : Public	[ Is static True. Containment is Not Specified. ]
 OGC API Tiles : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 VTS : Public	[ Is static True. Containment is Not Specified. ]
 WFS : Public	[ Is static True. Containment is Not Specified. ]
 WMS : Public	[ Is static True. Containment is Not Specified. ]
 WMTS : Public	[ Is static True. Containment is Not Specified. ]

**1.2.1.11 EnquiryTypeValue**

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

**Enquiry Type Codelist**

A list of the types of enquiry which may be submitted by an undertaker of works, representing the potential different phases of a project lifecycle.

Created on 18/06/2024. Last modified 04/08/2024

ATTRIBUTES	
 Emergency Works : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
Initial Enquiry : Public	[ Is static True. Containment is Not Specified. ]
Planned Works : Public	[ Is static True. Containment is Not Specified. ]
Planning and Site Investigation : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.12 NationalOrRegionalCoverageValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'








#### National or Regional Coverage Codelist

A list of countries, regions and administrative units in the UK.

Created on 11/05/2022. Last modified 04/08/2024

ATTRIBUTES	
East Midlands (England) : Public	[ Is static True. Containment is Not Specified. ]
East of England : Public	[ Is static True. Containment is Not Specified. ]
England : Public	[ Is static True. Containment is Not Specified. ]
England and Wales : Public	[ Is static True. Containment is Not Specified. ]
England Wales and Northern Ireland : Public	[ Is static True. Containment is Not Specified. ]
Great Britain : Public	[ Is static True. Containment is Not Specified. ]
London : Public	[ Is static True. Containment is Not Specified. ]
N/A : Public	[ Is static True. Containment is Not Specified. ]
North East (England) : Public	[ Is static True. Containment is Not Specified. ]
North West (England) : Public	[ Is static True. Containment is Not Specified. ]



ATTRIBUTES	
 Northern Ireland : Public	[ Is static True. Containment is Not Specified. ]
 Scotland : Public	[ Is static True. Containment is Not Specified. ]
 South East (England) : Public	[ Is static True. Containment is Not Specified. ]
 South West (England) : Public	[ Is static True. Containment is Not Specified. ]
 UK : Public	[ Is static True. Containment is Not Specified. ]
 Wales : Public	[ Is static True. Containment is Not Specified. ]
 West Midlands (England) : Public	[ Is static True. Containment is Not Specified. ]
 Yorkshire and the Humber : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.13 ObservationCategoryValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Category Codelist

A list of categories to which an Observation may be assigned.

Created on 13/06/2023. Last modified 04/08/2024

ATTRIBUTES	
 Contaminated Land : Public	[ Is static True. Containment is Not Specified. ]
 Hazardous Materials : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Overhead Obstruction : Public	[ Is static True. Containment is Not Specified. ]
 Security Report : Public	[ Is static True. Containment is Not Specified. ]
 Subsurface Conditions : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
 Subsurface Structures : Public	[ Is static True. Containment is Not Specified. ]
 Surface or Ground Conditions : Public	[ Is static True. Containment is Not Specified. ]
 Surface Structures : Public	[ Is static True. Containment is Not Specified. ]
 Unknown or Unidentified Object : Public	[ Is static True. Containment is Not Specified. ]
 Voids, Cellars, Basements : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.14 ObservationFeedbackRatingValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Feedback Rating Codelist

A list of broad ratings which may be applied to the quality and usefulness of an Observation.

Created on 13/06/2023. Last modified 04/08/2024

ATTRIBUTES	
 Negative : Public	[ Is static True. Containment is Not Specified. ]
 Neutral : Public	[ Is static True. Containment is Not Specified. ]
 Positive : Public	[ Is static True. Containment is Not Specified. ]



### 1.2.1.15 ObservationImpactValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Impact Codelist

A list of options for describing the impact of an Observation on works being undertaken.

Created on 23/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Minimal : Public	[ Is static True. Containment is Not Specified. ]
 Moderate : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
◆ No Impact : Public	[ Is static True. Containment is Not Specified. ]
◆ Other : Public	[ Is static True. Containment is Not Specified. ]
◆ Significant : Public	[ Is static True. Containment is Not Specified. ]
◆ Works Suspended : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.16 ObservationSharingScopePrimaryValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Sharing Scope Primary Codelist

A list of options describing the scope within which an Observation may be shared by the originator of the Observation.

Created on 13/06/2023. Last modified 04/08/2024

ATTRIBUTES	
◆ Named Organisations : Public	[ Is static True. Containment is Not Specified. ]
◆ Organisation Extended : Public	[ Is static True. Containment is Not Specified. ]
◆ Organisation Only : Public	[ Is static True. Containment is Not Specified. ]
◆ Private : Public	[ Is static True. Containment is Not Specified. ]
◆ Public : Public	[ Is static True. Containment is Not Specified. ]
◆ Supply Chain : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.17 ObservationSharingScopeSecondaryValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Sharing Scope Secondary Codelist

A list of options describing the scope within which an Observation may be shared by an organisation granted the ability to set a scope for sharing.

Created on 13/06/2023. Last modified 04/08/2024

ATTRIBUTES	
 Organisation Only : Public	[ Is static True. Containment is Not Specified. ]
 Private : Public	[ Is static True. Containment is Not Specified. ]
 Supply Chain : Public	[ Is static True. Containment is Not Specified. ]








### 1.2.1.18 ObservationStatusValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Status Codelist

A list of status values for an Observation.

Created on 06/02/2024. Last modified 04/08/2024

ATTRIBUTES	
 Accepted : Public	[ Is static True. Containment is Not Specified. ]
 Acknowledged : Public	[ Is static True. Containment is Not Specified. ]
 Actioned : Public	[ Is static True. Containment is Not Specified. ]
 Rejected : Public	[ Is static True. Containment is Not Specified. ]
 Removed : Public	[ Is static True. Containment is Not Specified. ]
 Submitted : Public	[ Is static True. Containment is Not Specified. ]
 Withdrawn : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.19 ObservationVisibilityStatusValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Observation Visibility Status Codelist

A list of options describing the overall visibility of an Observation.

Created on 13/06/2023. Last modified 04/08/2024

ATTRIBUTES	
 Deleted : Public	[ Is static True. Containment is Not Specified. ]
 Hidden : Public	[ Is static True. Containment is Not Specified. ]
 Visible : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.20 OrganisationTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Organisation Type Codelist

A list of types of organisation which may participate in NUAR in some capacity.

*Deliberately blank*

Created on 11/05/2022. Last modified 04/08/2024

### 1.2.1.21 RuleNotificationTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Rule Notification Type Codelist

A list of types of notification which may be used to notify of rules being triggered.

Created on 26/07/2024. Last modified 04/08/2024

ATTRIBUTES	
 API : Public	[ Is static True. Containment is Not Specified. ]
 Email : Public	[ Is static True. Containment is Not Specified. ]
 NUAR Notification : Public	[ Is static True. Containment is Not Specified. ]
 Others : Public	[ Is static True. Containment is Not Specified. ]
 SMS : Public	[ Is static True. Containment is Not Specified. ]





### 1.2.1.22 ServiceAreaPurposeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Service Area Purpose Codelist

A list of purposes which a Service Area entity may fulfil within NUAR.

Created on 14/07/2022. Last modified 04/08/2024

ATTRIBUTES	
 Asset Network Coverage : Public	[ Is static True. Containment is Not Specified. ]
 Operations Coverage : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Regulatory Area : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.1.23 ServiceProviderTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Service Provider Type Codelist

A list of roles that a service provider may fulfil within NUAR in future.

*Deliberately blank*

Created on 06/02/2024. Last modified 04/08/2024

### 1.2.1.24 UtilitySurveyTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Platform'

#### Utility Survey Type Codelist

A list of Utility Survey Types, primarily derived from PAS128:2022.

Created on 17/06/2024. Last modified 04/08/2024

ATTRIBUTES	
 Non-PAS128 Survey : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 PAS128:2022 – Type A (verification) : Public	[ Is static True. Containment is Not Specified. ]
 PAS128:2022 – Type B (detection) : Public	[ Is static True. Containment is Not Specified. ]
 PAS128:2022 – Type C (site reconnaissance) : Public	[ Is static True. Containment is Not Specified. ]

## ATTRIBUTES

 PAS128:2022 – Type D (desktop utility records search) : Public

[ Is static True. Containment is Not Specified. ]

## 1.2.2 NHDM-NUARCodelists\_Transformation

Package «ApplicationSchema» in package 'NHDM-NUARCodelistRegister'

NHDM-NUARCodelists\_Transformation

Version 2.1.2 Published

Created on 03/02/2023. Last modified 02/08/2024

### 1.2.2.1 NUAR Harmonised Data Model - Logical - NUARCodelists-Transformation diagram

GML diagram in package 'NHDM-NUARCodelists\_Transformation'

NUAR Harmonised Data Model - Logical - NUARCodelists-Transformation

Version 2.1.1

Created on 09/06/2023. Last modified 28/07/2024



Figure 3: NUAR Harmonised Data Model - Logical - NUARCodelists-Transformation

### 1.2.2.2 Codelist Register - Protected Sites

Package in package 'NHDM-NUARCodelists\_Transformation'

Codelist Register - Protected Sites

Version 2.1.2 Published

Created on 21/08/2021. Last modified 28/07/2024

#### 1.2.2.2.1 Codelist Register - Protected Sites diagram

GML diagram in package 'Codelist Register - Protected Sites'

Codelist Register - Protected Sites

Version 2.1.1

Created on 21/08/2021. Last modified 06/02/2024

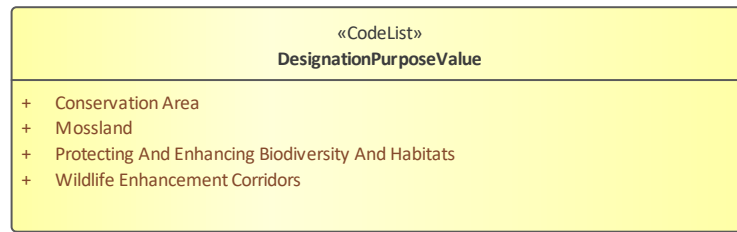


Figure 4: Codelist Register - Protected Sites





### 1.2.2.2.2 DesignationPurposeValue

Class «CodeList» in package 'Codelist Register - Protected Sites'

#### Designation Purpose Codelist

A list of conservation area designation purposes.

Created on 02/10/2021. Last modified 04/08/2024

ATTRIBUTES	
 Conservation Area : Public	[ Is static True. Containment is Not Specified. ]
 Mossland : Public	[ Is static True. Containment is Not Specified. ]
 Protecting And Enhancing Biodiversity And Habitats : Public	[ Is static True. Containment is Not Specified. ]
 Wildlife Enhancement Corridors : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.3 Codelist Register - Sewer Network

Package in package 'NHDM-NUARCodelists\_Transformation'

Codelist Register - Sewer Network

Version 2.1.2 Published

Created on 21/08/2021. Last modified 28/07/2024

#### 1.2.2.3.1 Codelist Register - Sewer Network diagram

GML diagram in package 'Codelist Register - Sewer Network'

Codelist Register - Sewer Network

Version 2.1.1

Created on 21/08/2021. Last modified 06/02/2024



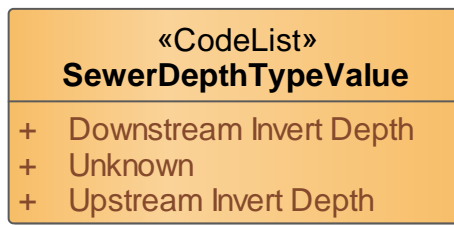


Figure 5: Codelist Register - Sewer Network

### 1.2.2.3.2 SewerDepthTypeValue

Class «CodeList» in package 'Codelist Register - Sewer Network'

#### Sewer Depth Type Codelist

A list of sewer depth types.

Created on 21/08/2021. Last modified 04/08/2024

ATTRIBUTES	
Downstream Invert Depth : Public	[ Is static True. Containment is Not Specified. ]
Unknown : Public	[ Is static True. Containment is Not Specified. ]
Upstream Invert Depth : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.4 AccessTypeValue

Class «CodeList» in package 'NHDM-NUARCodelists\_Transformation'

#### Access Type Codelist

A list of access types.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
Access Chamber : Public	[ Is static True. Containment is Not Specified. ]
Access Plate : Public	[ Is static True. Containment is Not Specified. ]
Other : Public	[ Is static True. Containment is Not Specified. ]
Pig Trap : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.5 ContactDetailsType

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Contact Details Type Codelist

A list of contact detail types.

Created on 11/05/2022. Last modified 04/08/2024

ATTRIBUTES	
 Asset Protection : Public	[ Is static True. Containment is Not Specified. ]
 Business : Public	[ Is static True. Containment is Not Specified. ]
 Emergency : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Planning : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.6 ContainerTypeValue









Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Container Type Codelist

A list of container types.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Arcade : Public	[ Is static True. Containment is Not Specified. ]
 Carrier Pipe : Public	[ Is static True. Containment is Not Specified. ]
 Conduit : Public	[ Is static True. Containment is Not Specified. ]
 Duct : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Pipe : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Pit : Public	[ Is static True. Containment is Not Specified. ]
 Subduct : Public	[ Is static True. Containment is Not Specified. ]
 Trench : Public	[ Is static True. Containment is Not Specified. ]
 Tunnel : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]
 Utilidor : Public	[ Is static True. Containment is Not Specified. ]
 Vault : Public	[ Is static True. Containment is Not Specified. ]
 Vent : Public	[ Is static True. Containment is Not Specified. ]


### 1.2.2.7 ConveyanceCategoryValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Conveyance Category Codelist

A list of roles that particular network segments play in overall network conveyance, e.g. Trunk vs Distribution.

Created on 18/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Auxiliary : Public	[ Is static True. Containment is Not Specified. ]
 Collection : Public	[ Is static True. Containment is Not Specified. ]
 Communication : Public	[ Is static True. Containment is Not Specified. ]
 Discharge : Public	[ Is static True. Containment is Not Specified. ]
 Distribution : Public	[ Is static True. Containment is Not Specified. ]
 Dual Flow and Return Line : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
◆ Fire : Public	[ Is static True. Containment is Not Specified. ]
◆ Flow Line : Public	[ Is static True. Containment is Not Specified. ]
◆ Other : Public	[ Is static True. Containment is Not Specified. ]
◆ Private : Public	[ Is static True. Containment is Not Specified. ]
◆ Return Line : Public	[ Is static True. Containment is Not Specified. ]
◆ Service : Public	[ Is static True. Containment is Not Specified. ]
◆ Transmission : Public	[ Is static True. Containment is Not Specified. ]
◆ Trunk : Public	[ Is static True. Containment is Not Specified. ]
◆ Unknown : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.8 ConveyanceMethodValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Conveyance Method Codelist

A list of methods by which utility commodities are conveyed through a network asset, e.g. gravity vs pumped.

Created on 18/08/2021. Last modified 04/08/2024

ATTRIBUTES	
◆ Extra High Voltage : Public	[ Is static True. Containment is Not Specified. ]
◆ Gravity : Public	[ Is static True. Containment is Not Specified. ]
◆ High Pressure : Public	[ Is static True. Containment is Not Specified. ]
◆ High Voltage : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
Intermediate Pressure : Public	[ Is static True. Containment is Not Specified. ]
Intermediate Voltage : Public	[ Is static True. Containment is Not Specified. ]
Low Pressure : Public	[ Is static True. Containment is Not Specified. ]
Low Voltage : Public	[ Is static True. Containment is Not Specified. ]
Medium Pressure : Public	[ Is static True. Containment is Not Specified. ]
Medium Voltage : Public	[ Is static True. Containment is Not Specified. ]
National High Pressure : Public	[ Is static True. Containment is Not Specified. ]
Other : Public	[ Is static True. Containment is Not Specified. ]
Pressure : Public	[ Is static True. Containment is Not Specified. ]
Pumped : Public	[ Is static True. Containment is Not Specified. ]
Regional High Pressure : Public	[ Is static True. Containment is Not Specified. ]
Regional Intermediate Pressure : Public	[ Is static True. Containment is Not Specified. ]
Syphon : Public	[ Is static True. Containment is Not Specified. ]
Unknown : Public	[ Is static True. Containment is Not Specified. ]
Vacuum : Public	[ Is static True. Containment is Not Specified. ]









### 1.2.2.9 DepthMethodValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Depth Method Codelist

A list of methods by which the stated depth of a utility asset has been determined.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Assumed : Public	[ Is static True. Containment is Not Specified. ]
 Estimated : Public	[ Is static True. Containment is Not Specified. ]
 Not Applicable : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Sensed : Public	[ Is static True. Containment is Not Specified. ]
 Standard : Public	[ Is static True. Containment is Not Specified. ]
 Surveyed : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]





### 1.2.2.10 EnhancedMeasuresTypeValue


Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Enhanced Measures Type Codelist

A list of values representing enhanced measures to be undertaken when using data stored in the platform, due to hazards or sensitivities associated with a feature or type of feature.

Created on 18/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Active monitoring of searches : Public	[ Is static True. Containment is Not Specified. ]
 Further consultation required : Public	[ Is static True. Containment is Not Specified. ]
 Permission required : Public	[ Is static True. Containment is Not Specified. ]
 Proceed with caution : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Special guidance required : Public	[ Is static True. Containment is Not Specified. ]








### 1.2.2.11 FeatureTypeValue



Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Feature Type Codelist:

A list of feature types for MUDDIOObjects. This may be redundant with the name of a derived feature, but allows generic utility information to be typed and also allows new feature types to be added without changing the model.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Access Object : Public	[ Is static True. Containment is Not Specified. ]
 Container Object : Public Alias: ContainintStructure	[ Is static True. Containment is Not Specified. ]
 Network : Public	[ Is static True. Containment is Not Specified. ]
 Network Accessory Object : Public	[ Is static True. Containment is Not Specified. ]
 Network Area : Public Alias: Secured Area	[ Is static True. Containment is Not Specified. ]
 Network Description Object : Public	[ Is static True. Containment is Not Specified. ]
 Network Link : Public Alias: Segment	[ Is static True. Containment is Not Specified. ]
 Network Node : Public Alias: Device / AccessPoint	[ Is static True. Containment is Not Specified. ]
 Network Object : Public	[ Is static True. Containment is Not Specified. ]
 Network Site : Public	[ Is static True. Containment is Not Specified. ]
 Physical Protection Object : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Planning Area : Public	[ Is static True. Containment is Not Specified. ]
 Support Object : Public Alias: Support Structure	[ Is static True. Containment is Not Specified. ]



### 1.2.2.12 HorizontalMeasurementMethodValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Horizontal Measurement Method Codelist

A list of values for methods of horizontal measurement used while surveying the asset.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Assumed : Public	[ Is static True. Containment is Not Specified. ]
 Estimated : Public	[ Is static True. Containment is Not Specified. ]
 Measured : Public	[ Is static True. Containment is Not Specified. ]
 Not Applicable : Public	[ Is static True. Containment is Not Specified. ]
 Sensed : Public	[ Is static True. Containment is Not Specified. ]
 Surveyed : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.13 InstallationMethodTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'









#### Installation Method Codelist

A list of values representing ways in which buried assets may have been installed.

Created on 17/08/2022. Last modified 04/08/2024

ATTRIBUTES	
 Bursting : Public	[ Is static True. Containment is Not Specified. ]



ATTRIBUTES	
 Dead Insertion : Public	[ Is static True. Containment is Not Specified. ]
 Directional Drilling : Public	[ Is static True. Containment is Not Specified. ]
 Ducted : Public	[ Is static True. Containment is Not Specified. ]
 Live Insertion : Public	[ Is static True. Containment is Not Specified. ]
 Moling : Public	[ Is static True. Containment is Not Specified. ]
 Open Cut : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Trenching : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.14 IntendedPermanenceValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Intended Permanence Codelist

A list of values for intended permanence.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Permanent : Public	[ Is static True. Containment is Not Specified. ]
 Temporary : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]







### 1.2.2.15 LifecycleStatusValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Lifecycle Status Codelist

A list of values representing the stage of the feature lifecycle an individual feature is in at a given time.

Created on 02/02/2023. Last modified 04/08/2024

ATTRIBUTES	
 Archived :	[ Is static True. Containment is Not Specified. ]
 Deleted :	[ Is static True. Containment is Not Specified. ]
 Publishable :	[ Is static True. Containment is Not Specified. ]
 Ready for Archive : Public	[ Is static True. Containment is Not Specified. ]
 Retired :	[ Is static True. Containment is Not Specified. ]
 Submitted :	[ Is static True. Containment is Not Specified. ]



### 1.2.2.16 LocaleReferenceTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Locale Reference Type Value

A list of types of locale reference, for example USRN, UPRN, Grid Reference.

Created on 28/10/2021. Last modified 04/08/2024

ATTRIBUTES	
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Postcode : Public	[ Is static True. Containment is Not Specified. ]
 UPRN : Public	[ Is static True. Containment is Not Specified. ]
 USRN : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.17 LocationTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Location Type Codelist

A list of location types.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Carriageway : Public	[ Is static True. Containment is Not Specified. ]
 Field : Public	[ Is static True. Containment is Not Specified. ]
 Footpath : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Verge : Public	[ Is static True. Containment is Not Specified. ]


### 1.2.2.18 MaterialGradeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Material Grade Codelist

A list of grades of materials used in assets (particularly pipelines).

Created on 03/10/2021. Last modified 04/08/2024

ATTRIBUTES	
 Other : Public	[ Is static True. Containment is Not Specified. ]


### 1.2.2.19 MaterialValue


















Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'









#### Material Codelist

A list of utility asset constituent materials.

Created on 18/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 ABS : Public	[ Is static True. Containment is Not Specified. ]
 Aluminium : Public	[ Is static True. Containment is Not Specified. ]
 Asbestos Cement : Public	[ Is static True. Containment is Not Specified. ]
 Asphalt : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Brick : Public	[ Is static True. Containment is Not Specified. ]
 Carbon Fibre : Public	[ Is static True. Containment is Not Specified. ]
 Cast Iron : Public	[ Is static True. Containment is Not Specified. ]
 Ceramic : Public	[ Is static True. Containment is Not Specified. ]
 Clay : Public	[ Is static True. Containment is Not Specified. ]
 Coated Steel : Public	[ Is static True. Containment is Not Specified. ]
 Composite : Public	[ Is static True. Containment is Not Specified. ]
 Concrete : Public	[ Is static True. Containment is Not Specified. ]
 Copper : Public	[ Is static True. Containment is Not Specified. ]
 Ductile Iron : Public	[ Is static True. Containment is Not Specified. ]
 Earthen : Public	[ Is static True. Containment is Not Specified. ]
 Fiberglass : Public	[ Is static True. Containment is Not Specified. ]
 Galvanised Iron : Public	[ Is static True. Containment is Not Specified. ]
 Galvanised Steel : Public	[ Is static True. Containment is Not Specified. ]
 Geotextile : Public	[ Is static True. Containment is Not Specified. ]
 Gravel : Public	[ Is static True. Containment is Not Specified. ]
 HDPE : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
 Iron : Public	[ Is static True. Containment is Not Specified. ]
 LDPE : Public	[ Is static True. Containment is Not Specified. ]
 Lead : Public	[ Is static True. Containment is Not Specified. ]
 MDPE : Public	[ Is static True. Containment is Not Specified. ]
 MOPC : Public	[ Is static True. Containment is Not Specified. ]
 Optical Fibre : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 PEX : Public	[ Is static True. Containment is Not Specified. ]
 Pitch Fibre : Public	[ Is static True. Containment is Not Specified. ]
 Plastic : Public	[ Is static True. Containment is Not Specified. ]
 PVC : Public	[ Is static True. Containment is Not Specified. ]
 Spun Iron : Public	[ Is static True. Containment is Not Specified. ]
 Steel : Public	[ Is static True. Containment is Not Specified. ]
 Stone : Public	[ Is static True. Containment is Not Specified. ]
 Tile : Public	[ Is static True. Containment is Not Specified. ]
 Transite : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Unknown : Public	[ Is static True. Containment is Not Specified. ]
 uPVC : Public	[ Is static True. Containment is Not Specified. ]
 Wood : Public	[ Is static True. Containment is Not Specified. ]












### 1.2.2.20 MeasurementUnitsValue

















Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Measurement Units Codelist

A list of attribute value measurement units.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 bar : Public	[ Is static True. Containment is Not Specified. ]
 Centimetres : Public	[ Is static True. Containment is Not Specified. ]
 Degrees : Public	[ Is static True. Containment is Not Specified. ]
 Degrees Centigrade : Public	[ Is static True. Containment is Not Specified. ]
 Degrees Fahrenheit : Public	[ Is static True. Containment is Not Specified. ]
 Feet : Public	[ Is static True. Containment is Not Specified. ]
 Inches : Public	[ Is static True. Containment is Not Specified. ]
 Kilometres : Public	[ Is static True. Containment is Not Specified. ]
 kV : Public	[ Is static True. Containment is Not Specified. ]
 mBar : Public	[ Is static True. Containment is Not Specified. ]
 Megahertz : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Metres : Public	[ Is static True. Containment is Not Specified. ]
 Miles : Public	[ Is static True. Containment is Not Specified. ]
 Millimetres : Public	[ Is static True. Containment is Not Specified. ]
 Radians : Public	[ Is static True. Containment is Not Specified. ]
 Revolutions : Public	[ Is static True. Containment is Not Specified. ]
 Square Centimetres : Public	[ Is static True. Containment is Not Specified. ]
 Square Feet : Public	[ Is static True. Containment is Not Specified. ]
 Square Inches : Public	[ Is static True. Containment is Not Specified. ]
 Square Kilometres : Public	[ Is static True. Containment is Not Specified. ]
 Square Metres : Public	[ Is static True. Containment is Not Specified. ]
 Square Miles : Public	[ Is static True. Containment is Not Specified. ]
 Square Millimetres : Public	[ Is static True. Containment is Not Specified. ]
 Square Yards : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]
 V : Public	[ Is static True. Containment is Not Specified. ]
 Yards : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.21 NetworkAccessoryTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Network Accessory Type Codelist

A list of specific types of Network Accessory objects.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Access : Public	[ Is static True. Containment is Not Specified. ]
 Container : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Physical Protection : Public	[ Is static True. Containment is Not Specified. ]
 Support : Public	[ Is static True. Containment is Not Specified. ]







### 1.2.2.22 NetworkDescriptionTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'







#### Network Description Type Codelist

A list of Network Description types, such as annotations, cross-section markers etc.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Annotation : Public	[ Is static True. Containment is Not Specified. ]
 Change of Diameter : Public	[ Is static True. Containment is Not Specified. ]
 Change of Material : Public	[ Is static True. Containment is Not Specified. ]
 Cross Section : Public	[ Is static True. Containment is Not Specified. ]
 Depth : Public	[ Is static True. Containment is Not Specified. ]
 Dimension : Public	[ Is static True. Containment is Not Specified. ]



ATTRIBUTES	
 Flow Direction : Public	[ Is static True. Containment is Not Specified. ]
 Multimedia Attachment : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Pressure Marker : Public	[ Is static True. Containment is Not Specified. ]
 Supplemental Drawing : Public	[ Is static True. Containment is Not Specified. ]
 Survey Quality Level : Public	[ Is static True. Containment is Not Specified. ]








### 1.2.2.23 NetworkLinkComponentTypeValue














Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Network Link Component Type Codelist

A list of specific types of NetworkLinks. These may be redundant with derived network link feature types and supplemented by more specific component type codelists. It allows new Network Link feature types to be added without changing the model.

Created on 17/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Auxiliary Power Conductor : Public	[ Is static True. Containment is Not Specified. ]
 Bridge : Public	[ Is static True. Containment is Not Specified. ]
 Cathodic Protection Conductor : Public	[ Is static True. Containment is Not Specified. ]
 Culvert : Public	[ Is static True. Containment is Not Specified. ]
 Drain : Public	[ Is static True. Containment is Not Specified. ]
 Line : Public	[ Is static True. Containment is Not Specified. ]
 Open Channel : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Optical Fibre : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Out of Standard Service : Public	[ Is static True. Containment is Not Specified. ]
 Permeable Asphalt : Public	[ Is static True. Containment is Not Specified. ]
 Pipe : Public	[ Is static True. Containment is Not Specified. ]
 Pipeline : Public	[ Is static True. Containment is Not Specified. ]
 Power Conductor : Public	[ Is static True. Containment is Not Specified. ]
 Rain Garden : Public	[ Is static True. Containment is Not Specified. ]
 Swale : Public	[ Is static True. Containment is Not Specified. ]
 Telecommunications Link : Public	[ Is static True. Containment is Not Specified. ]
 Telemetry Link : Public	[ Is static True. Containment is Not Specified. ]
 Tree Pit : Public	[ Is static True. Containment is Not Specified. ]
 Tunnel : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.24 NetworkNodeComponentTypeValue


















Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'


















#### Network Node Component Type Codelist

















A list of specific types of NetworkNodes. These may be redundant with derived network node feature types and supplemented by more specific component type codelists. It allows new NetworkNode feature types to be added without changing the model.

Created on 17/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Anchor Point : Public	[ Is static True. Containment is Not Specified. ]
 Anode : Public Properties: FeatureType = NetworkNode	[ Is static True. Containment is Not Specified. ]
 Beacon : Public	[ Is static True. Containment is Not Specified. ]
 Bollard : Public	[ Is static True. Containment is Not Specified. ]
 Cabinet : Public	[ Is static True. Containment is Not Specified. ]
 Capped End : Public	[ Is static True. Containment is Not Specified. ]
 Cathodic Protection Node : Public	[ Is static True. Containment is Not Specified. ]
 CCTV : Public	[ Is static True. Containment is Not Specified. ]
 Chamber : Public	[ Is static True. Containment is Not Specified. ]
 Cleaning Device : Public	[ Is static True. Containment is Not Specified. ]
 Culvert : Public	[ Is static True. Containment is Not Specified. ]
 Discharge Device : Public	[ Is static True. Containment is Not Specified. ]
 Drain : Public	[ Is static True. Containment is Not Specified. ]
 Earthing Equipment : Public	[ Is static True. Containment is Not Specified. ]
 EV Charging Point : Public	[ Is static True. Containment is Not Specified. ]
 Filter : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Flow Control : Public	[ Is static True. Containment is Not Specified. ]
 Gas Conditioner : Public	[ Is static True. Containment is Not Specified. ]
 Gully : Public	[ Is static True. Containment is Not Specified. ]
 Housing : Public	[ Is static True. Containment is Not Specified. ]
 Hydrant : Public	[ Is static True. Containment is Not Specified. ]
 Illuminated Sign : Public	[ Is static True. Containment is Not Specified. ]
 Injection Point : Public	[ Is static True. Containment is Not Specified. ]
 Inlet : Public	[ Is static True. Containment is Not Specified. ]
 Joint : Public	[ Is static True. Containment is Not Specified. ]
 Junction : Public	[ Is static True. Containment is Not Specified. ]
 Kiosk : Public	[ Is static True. Containment is Not Specified. ]
 Link Box : Public	[ Is static True. Containment is Not Specified. ]
 Measuring Device : Public	[ Is static True. Containment is Not Specified. ]
 Metering Device : Public	[ Is static True. Containment is Not Specified. ]
 Offtake : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Out of Standard Service : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Outlet : Public	[ Is static True. Containment is Not Specified. ]
 Overflow : Public	[ Is static True. Containment is Not Specified. ]
 Parking Meter : Public	[ Is static True. Containment is Not Specified. ]
 Pillar : Public	[ Is static True. Containment is Not Specified. ]
 Pit : Public	[ Is static True. Containment is Not Specified. ]
 Pond : Public	[ Is static True. Containment is Not Specified. ]
 Post : Public	[ Is static True. Containment is Not Specified. ]
 Pressure Reduction : Public	[ Is static True. Containment is Not Specified. ]
 Pumping Equipment : Public	[ Is static True. Containment is Not Specified. ]
 Purge Point : Public	[ Is static True. Containment is Not Specified. ]
 Rain Garden : Public	[ Is static True. Containment is Not Specified. ]
 Refuge Beacon : Public	[ Is static True. Containment is Not Specified. ]
 Regulator : Public	[ Is static True. Containment is Not Specified. ]
 Riser : Public	[ Is static True. Containment is Not Specified. ]
 Rodding Eye : Public	[ Is static True. Containment is Not Specified. ]
 School Crossing Flasher : Public	[ Is static True. Containment is Not Specified. ]
 Shaft : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
 Sign Light : Public	[ Is static True. Containment is Not Specified. ]
 Stand Pipe : Public	[ Is static True. Containment is Not Specified. ]
 Streetlight : Public	[ Is static True. Containment is Not Specified. ]
 Swale : Public	[ Is static True. Containment is Not Specified. ]
 Syphon : Public	[ Is static True. Containment is Not Specified. ]
 Tank : Public	[ Is static True. Containment is Not Specified. ]
 Tee : Public	[ Is static True. Containment is Not Specified. ]
 Telecommunications Node : Public	[ Is static True. Containment is Not Specified. ]
 Telemetry Node : Public	[ Is static True. Containment is Not Specified. ]
 Terminator : Public	[ Is static True. Containment is Not Specified. ]
 Traffic Signal : Public	[ Is static True. Containment is Not Specified. ]
 Trap : Public	[ Is static True. Containment is Not Specified. ]
 Tree Pit : Public	[ Is static True. Containment is Not Specified. ]
 Valve : Public	[ Is static True. Containment is Not Specified. ]
 Vent : Public	[ Is static True. Containment is Not Specified. ]
 Zebra Crossing : Public	[ Is static True. Containment is Not Specified. ]


### 1.2.2.25 NonUtilityObjectTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Non-Utility Object Type Codelist

A list of Non-Utility object types.

Created on 21/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Barrier : Public	[ Is static True. Containment is Not Specified. ]
 Basement or Cellar : Public	[ Is static True. Containment is Not Specified. ]
 Bridge : Public	[ Is static True. Containment is Not Specified. ]
 Duct : Public	[ Is static True. Containment is Not Specified. ]
 Foundation : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Passageway : Public	[ Is static True. Containment is Not Specified. ]
 Shaft : Public	[ Is static True. Containment is Not Specified. ]
 Storage Tank : Public	[ Is static True. Containment is Not Specified. ]
 Tracks : Public	[ Is static True. Containment is Not Specified. ]
 Tunnel : Public	[ Is static True. Containment is Not Specified. ]
 Vault : Public	[ Is static True. Containment is Not Specified. ]
 Wall : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.26 OperatingConveyanceLevelTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

### Operating Conveyance Level Codelist

A list of levels quantifying the methods by which utility commodities are conveyed through a network asset, e.g. pressure or voltage.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Pressure : Public	[ Is static True. Containment is Not Specified. ]
 Voltage : Public	[ Is static True. Containment is Not Specified. ]









### 1.2.2.27 OperationalStatusValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

### Operational Status Codelist

A list of operational status values for MUDDIOjects.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Abandoned : Public	[ Is static True. Containment is Not Specified. ]
 Commissioned : Public	[ Is static True. Containment is Not Specified. ]
 Decommissioned : Public	[ Is static True. Containment is Not Specified. ]
 Delete Before Installation : Public	[ Is static True. Containment is Not Specified. ]
 In Service : Public	[ Is static True. Containment is Not Specified. ]
 Installed : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Out Of Commission : Public	[ Is static True. Containment is Not Specified. ]



ATTRIBUTES	
 Pending Abandonment : Public	[ Is static True. Containment is Not Specified. ]
 Pending Removal : Public	[ Is static True. Containment is Not Specified. ]
 Proposed : Public	[ Is static True. Containment is Not Specified. ]
 Removed : Public	[ Is static True. Containment is Not Specified. ]
 Under Construction : Public	[ Is static True. Containment is Not Specified. ]
 Unfit For Service : Public	[ Is static True. Containment is Not Specified. ]
 Unknown : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.28 PhysicalProtectionTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Physical Protection Type Codelist

A list of types of physical protection used for assets.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Plate : Public	[ Is static True. Containment is Not Specified. ]
 Slabbing : Public	[ Is static True. Containment is Not Specified. ]
 Sleeve : Public	[ Is static True. Containment is Not Specified. ]
 Tape : Public	[ Is static True. Containment is Not Specified. ]
















### 1.2.2.29 PlanningAreaTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

**Planning Area Codelist**

A list of planning area types. Redundant with derived planning region feature types but allows new region types to be defined without changing the model.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Archaeological Site : Public	[ Is static True. Containment is Not Specified. ]
 Conservation Area : Public	[ Is static True. Containment is Not Specified. ]
 Coordination Zone : Public	[ Is static True. Containment is Not Specified. ]
 Former Industrial Site : Public	[ Is static True. Containment is Not Specified. ]
 Historical Site : Public	[ Is static True. Containment is Not Specified. ]
 Listed Building : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Permit to Dig Restricted Area : Public	[ Is static True. Containment is Not Specified. ]
 Scheduled Ancient Monument : Public	[ Is static True. Containment is Not Specified. ]
 Section 50 Site : Public	[ Is static True. Containment is Not Specified. ]
 Section 58 : Public	[ Is static True. Containment is Not Specified. ]
 Security Zone : Public	[ Is static True. Containment is Not Specified. ]
 Site of Special Scientific Interest : Public	[ Is static True. Containment is Not Specified. ]
 Tree Preservation Order : Public	[ Is static True. Containment is Not Specified. ]
 Wetland : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Wildlife Corridor : Public	[ Is static True. Containment is Not Specified. ]












### 1.2.2.30 QualityLevelValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Quality Level Codelist

A list of Utility Survey quality levels from PAS128:2022.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 QL-A : Public	[ Is static True. Containment is Not Specified. ]
 QL-B1 : Public	[ Is static True. Containment is Not Specified. ]
 QL-B1P : Public	[ Is static True. Containment is Not Specified. ]
 QL-B2 : Public	[ Is static True. Containment is Not Specified. ]
 QL-B2P : Public	[ Is static True. Containment is Not Specified. ]
 QL-B3 : Public	[ Is static True. Containment is Not Specified. ]
 QL-B3P : Public	[ Is static True. Containment is Not Specified. ]
 QL-B4 : Public	[ Is static True. Containment is Not Specified. ]
 QL-B4P : Public	[ Is static True. Containment is Not Specified. ]
 QL-C : Public	[ Is static True. Containment is Not Specified. ]
 QL-D : Public	[ Is static True. Containment is Not Specified. ]












### 1.2.2.31 ServiceAreaTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

**Service Area Type Codelist**

A list of specific types of Network Areas. Areas may relate to full coverage for a given network, more granular operational patches, individual sites or indications of rights of access.

Created on 17/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Administrative Boundary : Public	[ Is static True. Containment is Not Specified. ]
 Coverage inferred from data : Public	[ Is static True. Containment is Not Specified. ]
 Coverage of Works : Public	[ Is static True. Containment is Not Specified. ]
 Data Supply Area : Public	[ Is static True. Containment is Not Specified. ]
 Franchise Area : Public	[ Is static True. Containment is Not Specified. ]
 Licence Area Boundary : Public	[ Is static True. Containment is Not Specified. ]
 National or Regional Coverage : Public	[ Is static True. Containment is Not Specified. ]
 Operational Patch : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Right of Access : Public	[ Is static True. Containment is Not Specified. ]
 Site : Public	[ Is static True. Containment is Not Specified. ]

**1.2.2.32 SiteTypeValue**

Class «CodeList» in package 'NHDM-NUARCodelists\_Transformation'

**Site Type Codelist**

A list of specific types of Sites.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Compressor Station : Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
◆ General Site : Public	[ Is static True. Containment is Not Specified. ]
◆ Independent/Private Network Site : Public	[ Is static True. Containment is Not Specified. ]
◆ Multi-purpose Site : Public	[ Is static True. Containment is Not Specified. ]
◆ Other : Public	[ Is static True. Containment is Not Specified. ]
◆ Pumping Station : Public	[ Is static True. Containment is Not Specified. ]
◆ Regulator Site : Public	[ Is static True. Containment is Not Specified. ]
◆ Reservoir : Public	[ Is static True. Containment is Not Specified. ]
◆ Section 50 Site : Public	[ Is static True. Containment is Not Specified. ]
◆ Storage Site : Public	[ Is static True. Containment is Not Specified. ]
◆ Substation : Public	[ Is static True. Containment is Not Specified. ]
◆ Treatment Works : Public	[ Is static True. Containment is Not Specified. ]

### 1.2.2.33 SupportTypeValue


Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Support Type Codelist

A list of types of utility asset supports, e.g. Footing vs Tower.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
◆ Bed : Public	[ Is static True. Containment is Not Specified. ]
◆ Bridge : Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 Footing : Public	[ Is static True. Containment is Not Specified. ]
 Foundation : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Pad : Public	[ Is static True. Containment is Not Specified. ]
 Pole : Public	[ Is static True. Containment is Not Specified. ]
 Thrust Block : Public	[ Is static True. Containment is Not Specified. ]
 Thrust Plate : Public	[ Is static True. Containment is Not Specified. ]
 Tower : Public	[ Is static True. Containment is Not Specified. ]





### 1.2.2.34 TemperatureRangeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Temperature Range Codelist

A list of temperature ranges.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 < 50 degrees centigrade : Public	[ Is static True. Containment is Not Specified. ]
 > 80 degrees centigrade : Public	[ Is static True. Containment is Not Specified. ]
 50-80 degrees centigrade : Public	[ Is static True. Containment is Not Specified. ]
 Unheated : Public	[ Is static True. Containment is Not Specified. ]







### 1.2.2.35 UndergroundStatusValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

### Underground Status Codelist

A list of underground status, e.g. Underground vs. Surface, Utility assets which are not fully buried may still be represented in this model so as to provide important information and constraints on underground utility infrastructure.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Aboveground : Public	[ Is static True. Containment is Not Specified. ]
 Mixed : Public	[ Is static True. Containment is Not Specified. ]
 Overhead : Public	[ Is static True. Containment is Not Specified. ]
 Submerged : Public	[ Is static True. Containment is Not Specified. ]
 Surface : Public	[ Is static True. Containment is Not Specified. ]
 Underground : Public	[ Is static True. Containment is Not Specified. ]





### 1.2.2.36 UnitOfTimeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Unit Of Time Codelist

A list of values for units of time.

Created on 23/11/2021. Last modified 04/08/2024

ATTRIBUTES	
 Day : Public	[ Is static True. Containment is Not Specified. ]
 Month : Public	[ Is static True. Containment is Not Specified. ]
 Week : Public	[ Is static True. Containment is Not Specified. ]
 Year : Public	[ Is static True. Containment is Not Specified. ]
















### 1.2.2.37 UtilitySubTypeValue

Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'












**Utility Subtype Codelist**

A list of utility subtypes that classify utilities at a secondary level, such as surface water vs combined sewer.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Alarm : Public	[ Is static True. Containment is Not Specified. ]
 Ammonia : Public	[ Is static True. Containment is Not Specified. ]
 Combined Sewer : Public	[ Is static True. Containment is Not Specified. ]
 Cooled Water : Public	[ Is static True. Containment is Not Specified. ]
 CSO Overflow : Public	[ Is static True. Containment is Not Specified. ]
 Drainage : Public	[ Is static True. Containment is Not Specified. ]
 Electric Power : Public	[ Is static True. Containment is Not Specified. ]
 Foul Sewer : Public	[ Is static True. Containment is Not Specified. ]
 Glycol : Public	[ Is static True. Containment is Not Specified. ]
 Heated Water : Public	[ Is static True. Containment is Not Specified. ]
 Journey Time Apparatus : Public	[ Is static True. Containment is Not Specified. ]
 Natural Water : Public	[ Is static True. Containment is Not Specified. ]
 Non-Potable Water : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Potable Water : Public	[ Is static True. Containment is Not Specified. ]



ATTRIBUTES	
 Raw Water : Public	[ Is static True. Containment is Not Specified. ]
 Steam : Public	[ Is static True. Containment is Not Specified. ]
 Stored Water : Public	[ Is static True. Containment is Not Specified. ]
 Street Lighting : Public	[ Is static True. Containment is Not Specified. ]
 SuDS : Public	[ Is static True. Containment is Not Specified. ]
 Surface Water Sewer : Public	[ Is static True. Containment is Not Specified. ]
 Telecommunication : Public	[ Is static True. Containment is Not Specified. ]
 Trade Effluent : Public	[ Is static True. Containment is Not Specified. ]
 Treated Effluent : Public	[ Is static True. Containment is Not Specified. ]
 Treated Water : Public	[ Is static True. Containment is Not Specified. ]
 Untreated Effluent : Public	[ Is static True. Containment is Not Specified. ]



### 1.2.2.38 UtilityTypeValue














Class «CodeList» in package 'NHDM-NUARCodeLists\_Transformation'

#### Utility Type Codelist

A list of utility types for MUDDIOjects. Redundant with utility-specific derived feature types, but allows generic or hybrid asset information to be represented, or new utility types to be added without changing the model.

Created on 19/08/2021. Last modified 04/08/2024

ATTRIBUTES	
 Beer : Public	[ Is static True. Containment is Not Specified. ]
 Chemicals : Public	[ Is static True. Containment is Not Specified. ]










ATTRIBUTES	
 District Heating : Public	[ Is static True. Containment is Not Specified. ]
 Drainage : Public	[ Is static True. Containment is Not Specified. ]
 Electric : Public	[ Is static True. Containment is Not Specified. ]
 Gas : Public	[ Is static True. Containment is Not Specified. ]
 HVAC : Public	[ Is static True. Containment is Not Specified. ]
 Oil : Public	[ Is static True. Containment is Not Specified. ]
 Other : Public	[ Is static True. Containment is Not Specified. ]
 Petroleum : Public	[ Is static True. Containment is Not Specified. ]
 Sewer : Public Alias: Wasterwater / Stormwater	[ Is static True. Containment is Not Specified. ]
 Slurry : Public	[ Is static True. Containment is Not Specified. ]
 Telecommunication : Public	[ Is static True. Containment is Not Specified. ]
 Transportation : Public	[ Is static True. Containment is Not Specified. ]
 Water : Public	[ Is static True. Containment is Not Specified. ]

## 1.3 NHDM-NUARCustomBackdrop

Package «ApplicationSchema» in package 'NHDM-Logical'

NHDM-NUARCustomBackdrop  
Version 2.1.2 Published  
Created on 11/07/2022. Last modified 28/07/2024



ATTRIBUTES	
 featureSystemID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 featureType : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 newLifecycleStatus : LifecycleStatusValue Public	[ Is static True. Containment is Not Specified. ]
 newVersion : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 originalLifecycleStatus : LifecycleStatusValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 originalVersion : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 supersededByFeatureType : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 supersededByID : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 systemID : CharacterString Public	[ Stereotype is «identifier». Is static True. Containment is Not Specified. ]

### 1.3.3 NUARBackdropArea

Class «FeatureType» in package 'NHDM-NUARCustomBackdrop'

#### NUARBackdropArea

<<FeatureType>>

Representation of area (polygon) custom backdrop features.

Created on 11/07/2022. Last modified 23/03/2024

ATTRIBUTES	
 geometry : GM_Object Public	[ Is static True. Containment is Not Specified. ]

### 1.3.4 NUARBackdropLine

Class «FeatureType» in package 'NHDM-NUARCustomBackdrop'

#### NUARBackdropLine:

<<FeatureType>>

Representation of line custom backdrop features.

Created on 11/07/2022. Last modified 23/03/2024

#### ATTRIBUTES

 geometry : GM\_Object Public

[ Is static True. Containment is Not Specified. ]

#### ABSTRACT

### 1.3.5 NUARBackdropObject

Class «FeatureType» in package 'NHDM-NUARCustomBackdrop'

#### NUARBackdropObject:

<<FeatureType>>

Parent Feature Type for all tables in the <NUARCustomBackdrop> schema.

Created on 11/07/2022. Last modified 23/03/2024

#### ATTRIBUTES

 description : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

##### description:

##### Optional

Description of the feature.

[ Is static True. Containment is Not Specified. ]

 name : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


##### name:

##### Optional

Name of the feature.


[ Is static True. Containment is Not Specified. ]

#### ASSOCIATIONS

 Association (direction: Source -> Destination) dataSubmittedDuring


Source: Public (Class) NUARBackdropObject «FeatureType»

Target: Public submissionEventID (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataProvidedBy

Source: Public (Class) NUARBackdropObject «FeatureType»

Target: Public dataProviderID (Class) NUARActor  
«FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) backdropObject

Source: Public (Class) Relationship\_CoverageToBackdropObject  
«FeatureType»

Target: Public (Class) NUARBackdropObject  
«FeatureType»

### 1.3.6 NUARBackdropPoint

Class «FeatureType» in package 'NHDM-NUARCustomBackdrop'

#### NUARBackdropPoint:

<<FeatureType>>

Representation of point custom backdrop features.

Created on 11/07/2022. Last modified 23/03/2024

ATTRIBUTES	
 geometry : GM_Object Public	[ Is static True. Containment is Not Specified. ]

### 1.3.7 NUARBackdropRaster




Class «FeatureType» in package 'NHDM-NUARCustomBackdrop'

#### NUARBackdropRaster:

<<FeatureType>>

Representation of raster custom backdrop features.

Created on 11/07/2022. Last modified 23/03/2024

ATTRIBUTES	
 extent : GM_Object Public  <b>extent:</b> <b>Mandatory</b> The real-world extent of the raster.	[ Is static True. Containment is Not Specified. ]
 fullPath : CharacterString Public  <b>fullPath:</b> <b>Mandatory</b> The full path to the raster file.	[ Is static True. Containment is Not Specified. ]
 mimeType : CharacterString Public  <b>mimeType:</b> <b>Mandatory</b> The MIME Type of the raster file.	[ Is static True. Containment is Not Specified. ]

### 1.3.8 NUARBackdropText





Class «FeatureType» in package 'NHDM-NUARCustomBackdrop'

#### NUARBackdropText:

<<FeatureType>>

Representation of text/annotation custom backdrop features.

Created on 11/07/2022. Last modified 23/03/2024

ATTRIBUTES	
 geometry : GM_Object Public	[ Is static True. Containment is Not Specified. ]
 orientation : Real Public = 0  <b>orientation:</b> <b>Mandatory</b> <b>Default=0</b> The rotation angle for the display of the text.	[ Is static True. Containment is Not Specified. ]
 orientationMeasurementUnits : CharacterString Public = Degrees  <b>orientationMeasurementUnits:</b> <b>Mandatory</b> <b>Default='Degrees'</b> The unit of measure for the value in the <b>orientation</b> attribute. Values for this attribute are defined in the < <b>MeasurementUnitsValue</b> > codelist (typically <b>Degrees</b> or <b>Radians</b> ).	[ Is static True. Containment is Not Specified. ]
 textString : CharacterString Public  <b>textString:</b> <b>Mandatory</b> The text to be displayed.	[ Is static True. Containment is Not Specified. ]

## 1.4 NHDM-NUARData

Package «ApplicationSchema» in package 'NHDM-Logical'

This package contains the core principles from MUDDI.

NHDM-NUARData  
Version 2.1.2 Published  
Created on 17/08/2021. Last modified 28/07/2024

### 1.4.1 NUAR Harmonised Data Model - Logical - NUARData diagram

GML diagram in package 'NHDM-NUARData'

NUAR Harmonised Data Model - Logical - NUARData  
Version 2.1.2  
Created on 17/08/2021. Last modified 28/07/2024



Package in package 'NHDM-NUARData'

## Core Relationships



### 1.4.2.1 Core Relationships diagram

Class diagram in package 'Core Relationships'

Core Relationships

Version 2.1.2

Created on 16/11/2021. Last modified 29/07/2024

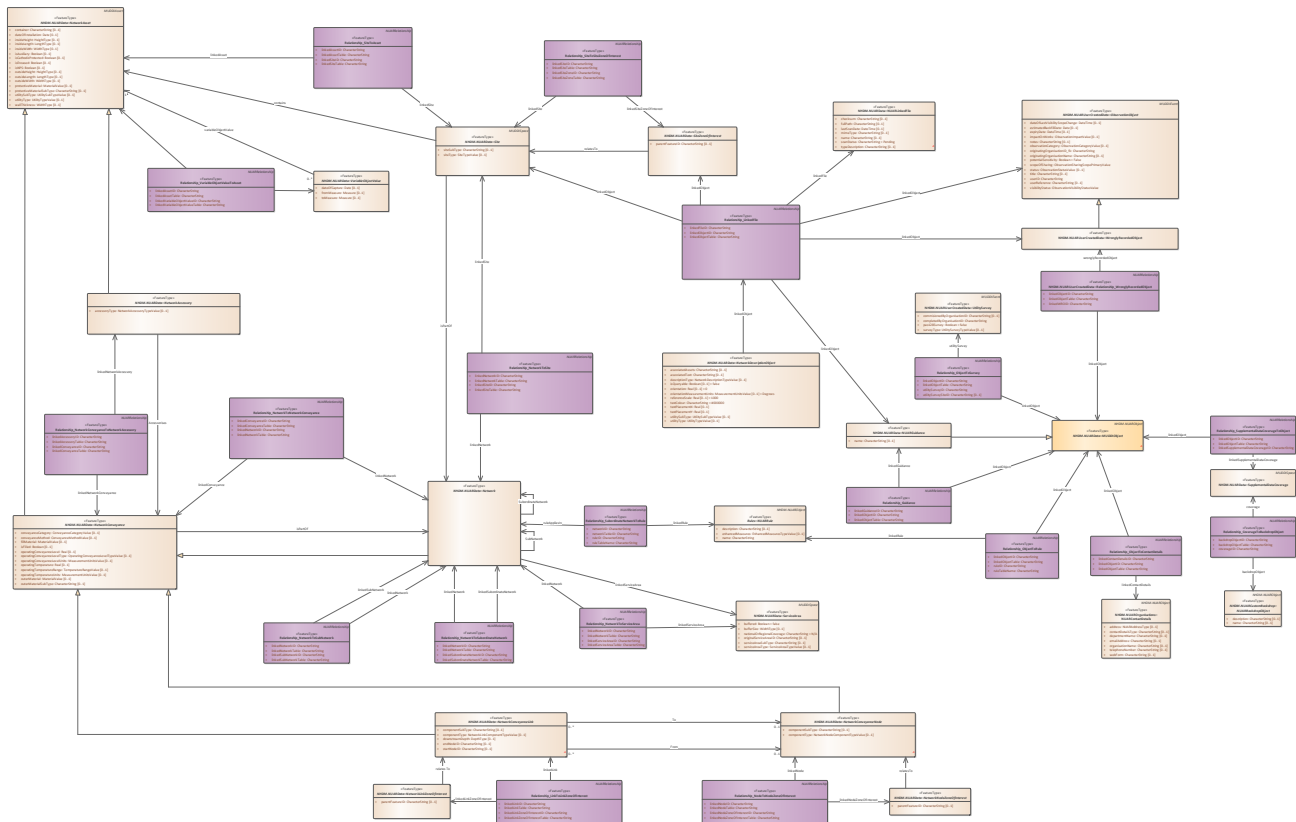


Figure 8: Core Relationships

ABSTRACT

### 1.4.2.2 NUARRelationship

Class «FeatureType» in package 'Core Relationships'

Parent feature type for Relationship lookup tables. Hold the foreign key relationships with NUARactor and NUSRSubmissionEvent.

Created on 11/07/2022. Last modified 11/07/2022


#### ASSOCIATIONS

Association (direction: Source -> Destination) dataSubmittedDuring

Source: Public (Class) NUARRelationship «FeatureType»

Target: Public submissionEventID (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) dataProvidedBy

Source: Public (Class) NUARRelationship «FeatureType»

Target: Public dataProviderID (Class) NUARActor  
«FeatureType»


Cardinality: [1]

**1.4.2.3 Relationship\_CoverageToBackdropObject**


Class «FeatureType» in package 'Core Relationships'

Created on 11/07/2022. Last modified 11/07/2022

**ATTRIBUTES**

 backdropObjectID : CharacterString Public

[ Is static True. Containment is Not Specified. ]


 backdropObjectTable : CharacterString Public

[ Is static True. Containment is Not Specified. ]

 coverageID : CharacterString Public

[ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) backdropObject

Source: Public (Class) Relationship\_CoverageToBackdropObject  
«FeatureType»

Target: Public (Class) NUARBackdropObject  
«FeatureType»

 Association (direction: Source -> Destination) coverage

Source: Public (Class) Relationship\_CoverageToBackdropObject  
«FeatureType»

Target: Public (Class) SupplementalDataCoverage  
«FeatureType»

**1.4.2.4 Relationship\_Guidance**

Class «FeatureType» in package 'Core Relationships'

**Relationship\_Guidance**

<<FeatureType>>



Table of relationships between Objects and Guidances. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 27/07/2024. Last modified 27/07/2024



**ATTRIBUTES**

 linkedGuidanceID : CharacterString Public

[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 linkedObjectID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedObjectTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_Guidance «FeatureType»	Target: Public (Class) MUDDIOBJECT «FeatureType»
 Association (direction: Source -> Destination) linkedGuidance	
Source: Public (Class) Relationship_Guidance «FeatureType»	Target: Public (Class) NUARGuidance «FeatureType»

### 1.4.2.5 Relationship\_LinkedFile

Class «FeatureType» in package 'Core Relationships'

#### Relationship\_LinkedFile

<<FeatureType>>









Table of relationships between linked files and objects. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 16/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedFileID : CharacterString Public	
<b>linkedFileID:</b> <<Attribute>> System ID of the file being referenced.	[ Is static True. Containment is Not Specified. ]
 linkedObjectID : CharacterString Public	
<b>linkedObjectID:</b> <<Attribute>> System ID of the object being referenced.	[ Is static True. Containment is Not Specified. ]
 linkedObjectTable : CharacterString Public	
<b>linkedObjectTable:</b> <<Attribute>> Database table in which the object being referenced is stored.	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject	

ASSOCIATIONS		
	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) NetworkDimension «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) Site «FeatureType»
 Association (direction: Source -> Destination) linkedFile	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) NUARLinkedFile «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) NUARGuidance «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) NetworkAnnotation «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) ObservationObject «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) SiteZoneOfInterest «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) WronglyRecordedObject «FeatureType»
 Association (direction: Source -> Destination) linkedObject	Source: Public (Class) NetworkDescriptionObject «FeatureType»	Target: Public (Class) Relationship_LinkedFile «FeatureType»

### 1.4.2.6 Relationship\_LinkToLinkZoneOfInterest

Class «FeatureType» in package 'Core Relationships'





#### Relationship\_LinkToLinkZoneOfInterest



<<FeatureType>>

Table of relationships between Links and Link Zones of Interest. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 18/11/2021. Last modified 23/11/2021

ATTRIBUTES

ATTRIBUTES	
 linkedLinkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedLinkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedLinkZoneOfInterestID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedLinkZoneOfInterestTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedLinkZoneOfInterest	
Source: Public (Class) Relationship_LinkToLinkZoneOfInterest «FeatureType»	Target: Public (Class) NetworkLinkZoneOfInterest «FeatureType»
 Association (direction: Source -> Destination) linkedLink	
Source: Public (Class) Relationship_LinkToLinkZoneOfInterest «FeatureType»	Target: Public (Class) NetworkConveyanceLink «FeatureType»

### 1.4.2.7 Relationship\_NetworkConveyanceToNetworkAccessory





Class «FeatureType» in package 'Core Relationships'

#### Relationship\_NetworkConveyanceToNetworkAccessory


<<FeatureType>>

Table of relationships between Network Conveyances and Network Accessories. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 18/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedAccessoryID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedAccessoryTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedConveyanceID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedConveyanceTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedNetworkConveyance	

ASSOCIATIONS	
Source: Public (Class) Relationship_NetworkConveyanceToNetworkAccessory «FeatureType»	Target: Public (Class) NetworkConveyance «FeatureType»
 Association (direction: Source -> Destination) linkedNetworkAccessory	
Source: Public (Class) Relationship_NetworkConveyanceToNetworkAccessory «FeatureType»	Target: Public (Class) NetworkAccessory «FeatureType»

### 1.4.2.8 Relationship\_NetworkToNetworkConveyance





Class «FeatureType» in package 'Core Relationships'



#### Relationship\_NetworkToNetworkConveyance

<<FeatureType>>

Table of relationships between Networks and Network Conveyance Assets. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 17/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedConveyanceID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedConveyanceTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToNetworkConveyance «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedConveyance	
Source: Public (Class) Relationship_NetworkToNetworkConveyance «FeatureType»	Target: Public (Class) NetworkConveyance «FeatureType»

### 1.4.2.9 Relationship\_NetworkToServiceArea





Class «FeatureType» in package 'Core Relationships'



#### Relationship\_NetworkToServiceArea

<<**FeatureType**>>

Table of relationships between Networks and Service Areas. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES	
 linkedNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedServiceAreaID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedServiceAreaTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToServiceArea «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedServiceArea	
Source: Public (Class) Relationship_NetworkToServiceArea «FeatureType»	Target: Public (Class) ServiceArea «FeatureType»

### 1.4.2.10 Relationship\_NetworkToSite




Class «FeatureType» in package 'Core Relationships'




#### Relationship\_NetworkToSite

<<**FeatureType**>>

Table of relationships between Networks and Sites. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 17/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSiteID : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 linkedSiteTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToSite «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedSite	
Source: Public (Class) Relationship_NetworkToSite «FeatureType»	Target: Public (Class) Site «FeatureType»

### 1.4.2.11 Relationship\_NetworkToSubNetwork







Class «FeatureType» in package 'Core Relationships'

#### Relationship\_NetworkToSubNetwork

<<FeatureType>>

Table of relationships between Networks and Sub Networks. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES	
 linkedNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSubNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSubNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToSubNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedSubNetwork	
Source: Public (Class) Relationship_NetworkToSubNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»



### 1.4.2.12 Relationship\_NetworkToSubordinateNetwork





Class «FeatureType» in package 'Core Relationships'



#### Relationship\_NetworkToSubordinateNetwork

<<FeatureType>>

Table of relationships between Networks and Subordinate Networks. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES	
 linkedNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSubordinateNetworkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSubordinateNetworkTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedSubordinateNetwork	
Source: Public (Class) Relationship_NetworkToSubordinateNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToSubordinateNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»

### 1.4.2.13 Relationship\_NodeToNodeZoneOfInterest



Class «FeatureType» in package 'Core Relationships'



#### Relationship\_NodeToNodeZoneOfInterest

<<FeatureType>>


Table of relationships between Node and Node Zones of Interest. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 18/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedNodeID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNodeTable : CharacterString Public	

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
 linkedNodeZoneOfInterestID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedNodeZoneOfInterestTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedNodeZoneOfInterest	
Source: Public (Class) Relationship_NodeToNodeZoneOfInterest «FeatureType»	Target: Public (Class) NetworkNodeZoneOfInterest «FeatureType»
 Association (direction: Source -> Destination) linkedNode	
Source: Public (Class) Relationship_NodeToNodeZoneOfInterest «FeatureType»	Target: Public (Class) NetworkConveyanceNode «FeatureType»

#### 1.4.2.14 Relationship\_ObjectToContactDetails

Class «FeatureType» in package 'Core Relationships'




##### Relationship\_ObjectToContactDetails

<<FeatureType>>



Table of relationships between Objects and Contact Details. This will be used to link assets with contact details that should be shown in preference to the Data Provider's contact details.

These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 24/05/2022. Last modified 23/03/2024

ATTRIBUTES	
 linkedContactDetailsID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedObjectID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedObjectTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]


ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_ObjectToContactDetails «FeatureType»	Target: Public (Class) MUDDIOBJECT «FeatureType»
 Association (direction: Source -> Destination) linkedContactDetails	
Source: Public (Class) Relationship_ObjectToContactDetails «FeatureType»	Target: Public (Class) NUARContactDetails «FeatureType»

## ASSOCIATIONS

**1.4.2.15 Relationship\_ObjectToRule***Class «FeatureType» in package 'Core Relationships'*


Created on 06/02/2024. Last modified 06/02/2024

## ATTRIBUTES

 linkedObjectID : CharacterString Public**linkedObjectID****Mandatory**


dataproviderassigneduniqueid in the specified table of the object related to a rule.

[ Is static True. Containment is Not Specified. ]

 linkedObjectTable : CharacterString Public**linkedObjectTable****Mandatory**


The name of the table - qualified by a schema name - containing the object.

[ Is static True. Containment is Not Specified. ]

 ruleID : CharacterString Public**ruleID****Mandatory**

systemid in the specified table of the rule to which the object is related.


[ Is static True. Containment is Not Specified. ]

 ruleTableName : CharacterString Public**ruleTableName****Mandatory**

The name of the table - qualified by a schema name - containing the related rule.

[ Is static True. Containment is Not Specified. ]

## ASSOCIATIONS

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_ObjectToRule «FeatureType»

Target: Public (Class) MUDDIOBJECT «FeatureType»

 Association (direction: Source -> Destination) linkedRule





Source: Public (Class) Relationship\_ObjectToRule «FeatureType»



Target: Public (Class) NUARRule «FeatureType»

### 1.4.2.16 Relationship\_ObjectToSurvey

Class «FeatureType» in package 'Core Relationships'

Created on 17/06/2024. Last modified 17/06/2024

ATTRIBUTES	
 linkedObjectID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedObjectTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 utilitySurveyID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 utilitySurveySiteID : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_ObjectToSurvey «FeatureType»	Target: Public (Class) MUDDIOBJECT «FeatureType»
 Association (direction: Source -> Destination) utilitySurvey	
Source: Public (Class) Relationship_ObjectToSurvey «FeatureType»	Target: Public (Class) UtilitySurvey «FeatureType»

### 1.4.2.17 Relationship\_SiteToAsset



Class «FeatureType» in package 'Core Relationships'



#### Relationship\_SiteToAsset

<<FeatureType>>



Table of relationships between Sites and Assets. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 17/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedAssetID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedAssetTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 linkedSiteID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSiteTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedSite	
Source: Public (Class) Relationship_SiteToAsset «FeatureType»	Target: Public (Class) Site «FeatureType»
 Association (direction: Source -> Destination) linkedAsset	
Source: Public (Class) Relationship_SiteToAsset «FeatureType»	Target: Public (Class) NetworkAsset «FeatureType»

### 1.4.2.18 Relationship\_SiteToSiteZoneOfInterest


Class «FeatureType» in package 'Core Relationships'

#### Relationship\_SiteToSiteZoneOfInterest

<<FeatureType>>

Table of relationships between Sites and Site Zones of Interest. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 17/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedSiteID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSiteTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSiteZoneID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSiteZoneTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedSite	
Source: Public (Class) Relationship_SiteToSiteZoneOfInterest «FeatureType»	Target: Public (Class) Site «FeatureType»
 Association (direction: Source -> Destination) linkedSiteZoneOfInterest	
Source: Public (Class) Relationship_SiteToSiteZoneOfInterest «FeatureType»	Target: Public (Class) SiteZoneOfInterest «FeatureType»

## ASSOCIATIONS



**1.4.2.19 Relationship\_SubordinateNetworkToRule***Class «FeatureType» in package 'Core Relationships'*

Created on 27/07/2024. Last modified 27/07/2024

## ATTRIBUTES

 networkID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 networkTableID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 ruleID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 ruleTableName : CharacterString Public	[ Is static True. Containment is Not Specified. ]




## ASSOCIATIONS



 Association (direction: Source -> Destination) ruleAppliesIn	
Source: Public (Class) Relationship_SubordinateNetworkToRule «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedRule	
Source: Public (Class) Relationship_SubordinateNetworkToRule «FeatureType»	Target: Public (Class) NUARRule «FeatureType»

**1.4.2.20 Relationship\_SupplementalDataCoverageToObject***Class «FeatureType» in package 'Core Relationships'*

Created on 13/10/2022. Last modified 13/10/2022

## ATTRIBUTES

 linkedObjectID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedObjectTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedSupplementalDataCoverageID : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_SupplementalDataCoverageToObject «FeatureType»	Target: Public (Class) MUDDIObjct «FeatureType»
 Association (direction: Source -> Destination) linkedSupplementalDataCoverage	
Source: Public (Class) Relationship_SupplementalDataCoverageToObject «FeatureType»	Target: Public (Class) SupplementalDataCoverage «FeatureType»

### 1.4.2.21 Relationship\_VariableObjectValueToAsset







Class «FeatureType» in package 'Core Relationships'

#### Relationship\_VariableObjectValueToAsset

<<FeatureType>>

Table of relationships between Variable Object Values and Assets. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 18/11/2021. Last modified 23/11/2021

ATTRIBUTES	
 linkedAssetID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedAssetTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedVariableObjectValueID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 linkedVariableObjectValueTable : CharacterString Public	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination)	
Source: Public (Class) Relationship_VariableObjectValueToAsset «FeatureType»	Target: Public (Class) VariableObjectValue «FeatureType»
 Association (direction: Source -> Destination)	
Source: Public (Class) Relationship_VariableObjectValueToAsset «FeatureType»	Target: Public (Class) NetworkAsset «FeatureType»

## 1.4.3 Drainage

### Package in package 'NHDM-NUARData'

The Drainage package comprises logical data model entities representing drainage assets above and below ground. This logical data model is intended for generating physical data models

Drainage  
Version 2.1.2 Published  
Created on 15/10/2020. Last modified 28/07/2024

#### 1.4.3.1 Drainage diagram

##### Class diagram in package 'Drainage'

Drainage  
Version 2.1.1  
Created on 15/10/2020. Last modified 28/07/2024

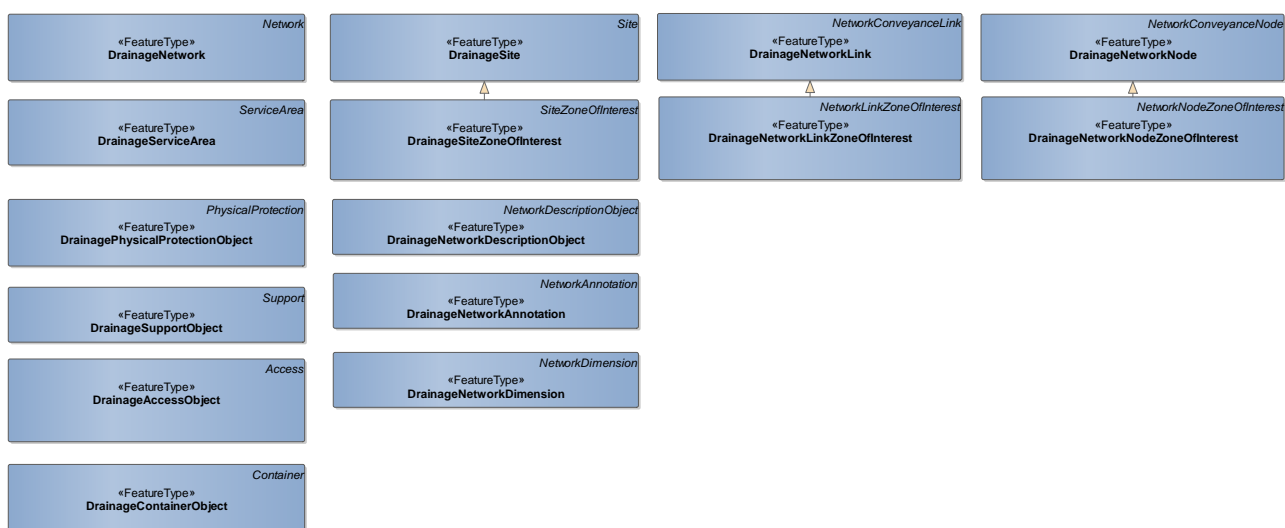


Figure 9: Drainage

#### 1.4.3.2 DrainageAccessObject

##### Class «FeatureType» in package 'Drainage'

##### DrainageAccessObject

An Access object accessorising a Drainage network feature.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.3.3 DrainageContainerObject

##### Class «FeatureType» in package 'Drainage'

##### DrainageContainerObject

A Container object containing a Drainage network feature.

Created on 25/10/2021. Last modified 23/11/2021



### 1.4.3.4 DrainageNetwork

*Class «FeatureType» in package 'Drainage'*

#### **DrainageNetwork**

A network in the Drainage domain.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.3.5 DrainageNetworkAnnotation

*Class «FeatureType» in package 'Drainage'*

#### **DrainageNetworkAnnotation:**

**<<FeatureType>>**

A textual description of an element of a drainage network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.3.6 DrainageNetworkDescriptionObject

*Class «FeatureType» in package 'Drainage'*

#### **DrainageNetworkDescriptionObject:**

**<<FeatureType>>**

An artefact that describes an element of a drainage network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.3.7 DrainageNetworkDimension

*Class «FeatureType» in package 'Drainage'*

#### **DrainageNetworkDimension:**

**<<FeatureType>>**

A descriptive element that describes a measurement of a drainage network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.3.8 DrainageNetworkLink

*Class «FeatureType» in package 'Drainage'*

#### **DrainageNetworkLink:**

**<<FeatureType>>**

A conveyance link in a drainage network

Created on 06/08/2019. Last modified 23/11/2021

### 1.4.3.9 DrainageNetworkLinkZoneOfInterest

*Class «FeatureType» in package 'Drainage'*

#### **DrainageNetworkLinkZoneOfInterest**

A Zone of Interest for a drainage conveyance link.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.3.10 DrainageNetworkNode

*Class «FeatureType» in package 'Drainage'*

##### **DrainageNetworkNode:**

**<<FeatureType>>**

A conveyance node in a drainage network

Created on 06/08/2019. Last modified 23/11/2021

#### 1.4.3.11 DrainageNetworkNodeZoneOfInterest

*Class «FeatureType» in package 'Drainage'*

##### **DrainageNetworkNodeZoneOfInterest**

A Zone of Interest for a drainage conveyance node.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.3.12 DrainagePhysicalProtectionObject

*Class «FeatureType» in package 'Drainage'*

##### **DrainagePhysicalProtectionObject**

A Physical Protection object accessorising a Drainage network feature.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.3.13 DrainageServiceArea

*Class «FeatureType» in package 'Drainage'*

##### **DrainageServiceArea**

A Service Area for a Drainage network.

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.3.14 DrainageSite

*Class «FeatureType» in package 'Drainage'*

##### **DrainageSite:**

**<<FeatureType>>**

A site in a drainage network.

Created on 02/10/2021. Last modified 23/11/2021

#### 1.4.3.15 DrainageSiteZoneOfInterest

*Class «FeatureType» in package 'Drainage'*

## DrainageSiteZoneOfInterest

A Zone of Interest for a drainage site.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.3.16 DrainageSupportObject

Class «FeatureType» in package 'Drainage'

#### DrainageSupportObject

A Support object accessorising a Drainage network feature.

Created on 25/10/2021. Last modified 23/11/2021

## 1.4.4 Electricity Network

Package in package 'NHDM-NUARData'

The Electricity Network package comprises logical data model entities representing electrical power utility infrastructure assets above and below ground. This logical data model is intended for generating physical data models

Electricity Network  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

### 1.4.4.1 Electricity Network diagram

Class diagram in package 'Electricity Network'

Electricity Network

Version 2.1.1

Created on 06/08/2019. Last modified 27/07/2024



Figure 10: Electricity Network

#### 1.4.4.2 ElectricityAccessObject

Class «FeatureType» in package 'Electricity Network'

##### ElectricityAccessObject

An Access object accessorising an Electricity network feature.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.4.3 ElectricityContainerObject

Class «FeatureType» in package 'Electricity Network'

##### ElectricityContainerObject




A Container object containing an Electricity network feature.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.4.4 ElectricityLinkTypeValue

Class «CodeList» in package 'Electricity Network'

Created on 22/10/2021. Last modified 22/10/2021

ATTRIBUTES	
 Auxiliary Power Conductor : Public	[ Is static True. Containment is Not Specified. ]
 Cathodic Protection Conductor : Public	[ Is static True. Containment is Not Specified. ]
 Power Conductor : Public	[ Is static True. Containment is Not Specified. ]

#### 1.4.4.5 ElectricityNetwork

Class «FeatureType» in package 'Electricity Network'

##### ElectricityNetwork

A network in the Electricity domain.

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.4.6 ElectricityNetworkAnnotation

Class «FeatureType» in package 'Electricity Network'

##### ElectricityNetworkAnnotation:

<<*FeatureType*>>

A textual description of an element of an electricity network.

Created on 21/01/2022. Last modified 21/01/2022

#### 1.4.4.7 ElectricityNetworkDescriptionObject

Class «*FeatureType*» in package 'Electricity Network'

**ElectricityNetworkDescriptionObject:**

<<*FeatureType*>>

An artefact that describes an element of an electricity network.

Created on 21/01/2022. Last modified 21/01/2022

#### 1.4.4.8 ElectricityNetworkDimension

Class «*FeatureType*» in package 'Electricity Network'

**ElectricityNetworkDimension:**

<<*FeatureType*>>

A descriptive element that describes a measurement of an electricity network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

#### 1.4.4.9 ElectricityNetworkLink

Class «*FeatureType*» in package 'Electricity Network'


**ElectricityNetworkLink:**

<<*FeatureType*>>

Type of Network Link that conveys electrical power.

Created on 06/08/2019. Last modified 23/11/2021

##### ATTRIBUTES

 operatingVoltage : OperatingVoltageType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**operatingVoltage:**

**Optional**

Standard voltage measure conveyed by this electrical utility asset

[ Is static True. Containment is Not Specified. ]

#### 1.4.4.10 ElectricityNetworkLinkZoneOfInterest

Class «*FeatureType*» in package 'Electricity Network'

**ElectricityNetworkLinkZoneOfInterest**

A Zone of Interest for an electricity conveyance link.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.4.11 ElectricityNetworkNode

Class «FeatureType» in package 'Electricity Network'


### ElectricityNetworkNode:

<<FeatureType>>

Type of network node that conveys electrical power.

Created on 06/08/2019. Last modified 23/11/2021

#### ATTRIBUTES

 operatingVoltage : OperatingVoltageType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

#### operatingVoltage:

#### Optional

Standard voltage measure conveyed by this electrical utility asset

[ Is static True. Containment is Not Specified. ]

### 1.4.4.12 ElectricityNetworkNodeZoneOfInterest

Class «FeatureType» in package 'Electricity Network'

### ElectricityNetworkNodeZoneOfInterest

A Zone of Interest for an electricity conveyance node.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.4.13 ElectricityPhysicalProtectionObject

Class «FeatureType» in package 'Electricity Network'

### ElectricityPhysicalProtectionObject

A Physical Protection object accessorising an Electricity network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.4.14 ElectricityServiceArea

Class «FeatureType» in package 'Electricity Network'

### ElectricityServiceArea

A Service Area for an Electricity network.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.4.15 ElectricitySite

Class «FeatureType» in package 'Electricity Network'

### ElectricitySite:

<<FeatureType>>

Type of Site that contains and may restrict access to electrical utility assets.

Created on 06/08/2019. Last modified 23/11/2021

#### 1.4.4.16 ElectricitySiteZoneOfInterest

Class «FeatureType» in package 'Electricity Network'

##### ElectricitySiteZoneOfInterest

A Zone of Interest for an electricity site.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.4.17 ElectricitySupportObject

Class «FeatureType» in package 'Electricity Network'

##### ElectricitySupportObject



A Support object accessorising an Electricity network feature.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.4.18 OperatingVoltageType

Class «DataType» in package 'Electricity Network'

Created on 20/10/2021. Last modified 20/10/2021

ATTRIBUTES	
 operatingVoltage : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 unitOfMeasure : MeasurementUnitsValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]

### 1.4.5 Fuel and Chemicals Network

Package in package 'NHDM-NUARData'

The Fuel and Chemicals Network package comprises logical data model entities representing fuel and chemical pipeline networks. This logical data model is intended for generating physical data models

Fuel and Chemicals Network  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

#### 1.4.5.1 Fuel and Chemicals Network diagram

Class diagram in package 'Fuel and Chemicals Network'

## Fuel and Chemicals Network

Version 2.1.1

Created on 06/08/2019. Last modified 27/07/2024

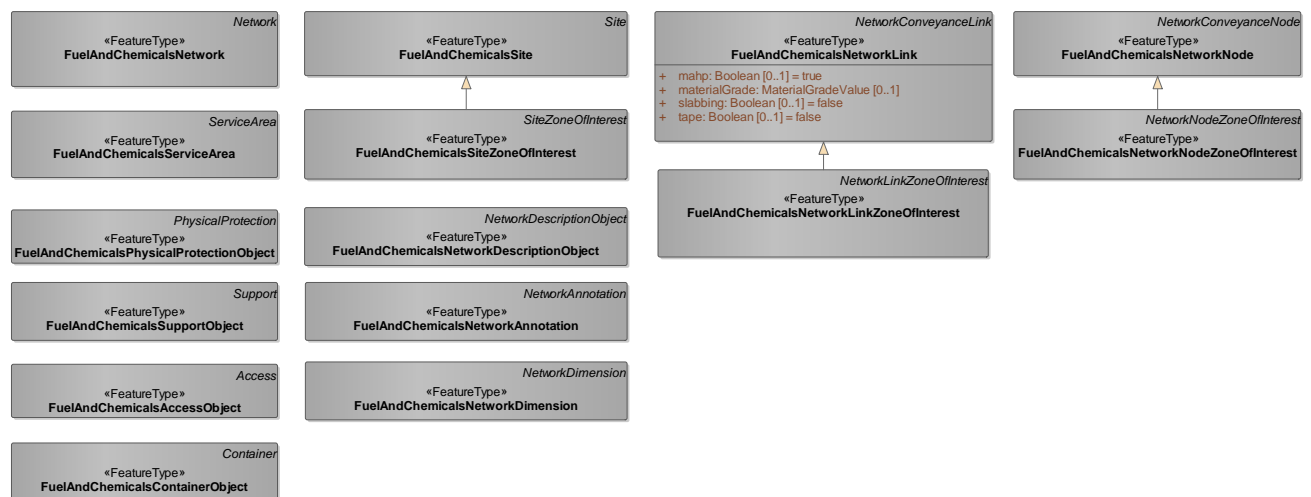


Figure 11: Fuel and Chemicals Network

### 1.4.5.2 FuelAndChemicalsAccessObject

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsAccessObject

An Access object accessorising a Fuel or Chemical network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.5.3 FuelAndChemicalsContainerObject

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsContainerObject

A Container object containing a Fuel or Chemical network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.5.4 FuelAndChemicalsNetwork

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsNetwork

A network in the Fuel and Chemicals domain.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.5.5 FuelAndChemicalsNetworkAnnotation

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsNetworkAnnotation:

<<FeatureType>>



A textual description of an element of a fuel or chemical network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.5.6 FuelAndChemicalsNetworkDescriptionObject

Class «FeatureType» in package 'Fuel and Chemicals Network'

**FuelAndChemicalsNetworkDescriptionObject:**

<<FeatureType>>

An artefact that describes an element of a fuel or chemical network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.5.7 FuelAndChemicalsNetworkDimension

Class «FeatureType» in package 'Fuel and Chemicals Network'

**FuelAndChemicalsNetworkDimension:**

<<FeatureType>>

A descriptive element that describes a measurement of a fuel or chemical network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.5.8 FuelAndChemicalsNetworkLink




Class «FeatureType» in package 'Fuel and Chemicals Network'


**FuelAndChemicalsNetworkLink:**

<<FeatureType>>

Pipeline network link for the conveyance of fuel or chemicals.

Created on 03/10/2021. Last modified 23/11/2021

ATTRIBUTES	
 mahp : Boolean Public = true Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>mahp:</b>  <b>Optional</b>  Is this asset classified as a Major Accident Hazard Pipeline?  <div>[ Is static True. Containment is Not Specified. ]</div>	
 materialGrade : MaterialGradeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>materialGrade:</b>  <b>Optional</b>  What is the material grade for this asset?  Values for this attribute are defined in the <MaterialGradeValue> codelist.  <div>[ Is static True. Containment is Not Specified. ]</div>	
 slabbing : Boolean Public = false Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	

ATTRIBUTES	
<b>slabbing:</b>  <b>Optional</b>  Is this asset protected by slabbing?  <div>[ Is static True. Containment is Not Specified. ]</div>	
 <b>tape</b> : Boolean Public = false Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>tape:</b>  <b>Optional</b>  Is tape present above this asset?  <div>[ Is static True. Containment is Not Specified. ]</div>	

### 1.4.5.9 FuelAndChemicalsNetworkLinkZoneOfInterest

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsNetworkLinkZoneOfInterest

A Zone of Interest for a Fuel or Chemical conveyance link.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.5.10 FuelAndChemicalsNetworkNode

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsNetworkNode:

<<FeatureType>>

Fuel and Chemicals Pipeline network node asset connecting pipeline sections and/or performing another network function

Created on 03/10/2021. Last modified 23/11/2021

### 1.4.5.11 FuelAndChemicalsNetworkNodeZoneOfInterest

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsNetworkNodeZoneOfInterest

A Zone of Interest for a Fuel or Chemical conveyance node.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.5.12 FuelAndChemicalsPhysicalProtectionObject

Class «FeatureType» in package 'Fuel and Chemicals Network'

#### FuelAndChemicalsPhysicalProtectionObject

A Physical Protection object accessorising a Fuel or Chemical network feature.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.5.13 FuelAndChemicalsServiceArea

*Class «FeatureType» in package 'Fuel and Chemicals Network'*

##### **FuelAndChemicalsServiceArea**

A Service Area for a Fuel or Chemical network.

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.5.14 FuelAndChemicalsSite

*Class «FeatureType» in package 'Fuel and Chemicals Network'*

##### **FuelAndChemicalsSite:**

*<<FeatureType>>*

Fuel and Chemicals pipeline network facility containing other network assets that may be secured

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.5.15 FuelAndChemicalsSiteZoneOfInterest

*Class «FeatureType» in package 'Fuel and Chemicals Network'*

##### **FuelAndChemicalsSiteZoneOfInterest**

A Zone of Interest for a Fuel or Chemical site.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.5.16 FuelAndChemicalsSupportObject

*Class «FeatureType» in package 'Fuel and Chemicals Network'*

##### **FuelAndChemicalsSupportObject**

A Support object accessorising a Fuel or Chemical network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.6 Gas Network

*Package in package 'NHDM-NUARData'*

The Gas Network package comprises logical data model entities representing gas utility infrastructure assets above and below ground. This logical data model is intended for generating physical data models

Gas Network  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

#### 1.4.6.1 Gas Network diagram

## Class diagram in package 'Gas Network'

Gas Network

Version 2.1.1

Created on 06/08/2019. Last modified 27/07/2024

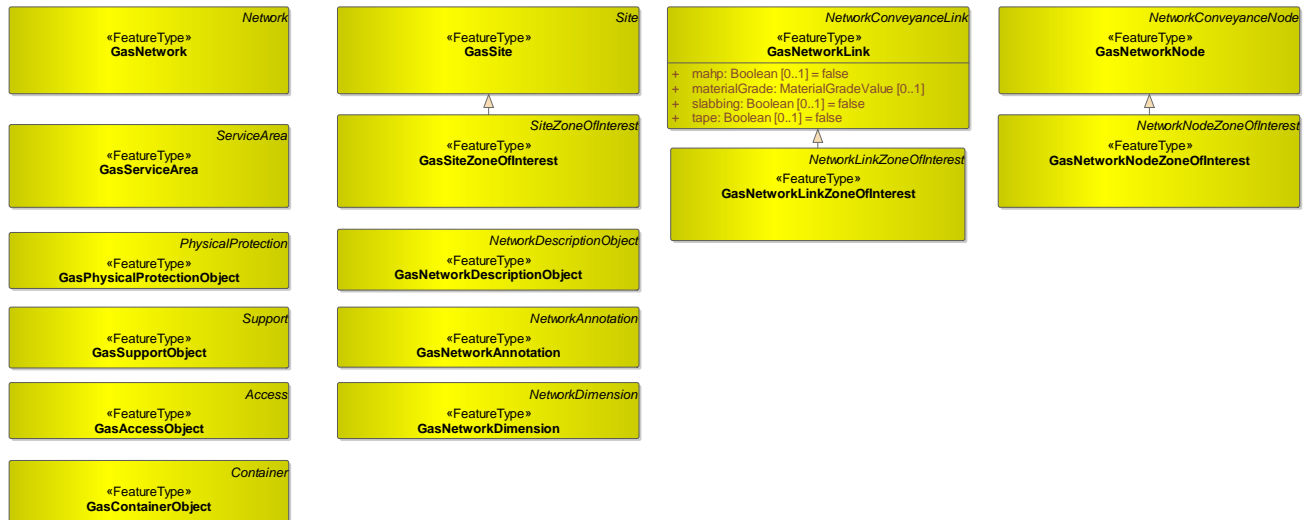


Figure 12: Gas Network

### 1.4.6.2 GasAccessObject

Class «FeatureType» in package 'Gas Network'

#### GasAccessObject

An Access object accessorising a Gas network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.6.3 GasContainerObject

Class «FeatureType» in package 'Gas Network'

#### GasContainerObject

A Container object containing a Gas network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.6.4 GasNetwork

Class «FeatureType» in package 'Gas Network'

#### GasNetwork

A network in the Gas domain.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.6.5 GasNetworkAnnotation

Class «FeatureType» in package 'Gas Network'

#### GasNetworkAnnotation:

<<FeatureType>>

A textual description of an element of a gas network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.6.6 GasNetworkDescriptionObject

Class «FeatureType» in package 'Gas Network'

#### GasNetworkDescriptionObject:

<<FeatureType>>

An artefact that describes an element of a gas network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.6.7 GasNetworkDimension

Class «FeatureType» in package 'Gas Network'

#### GasNetworkDimension:

<<FeatureType>>

A descriptive element that describes a measurement of a gas network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.6.8 GasNetworkLink



Class «FeatureType» in package 'Gas Network'



#### GasNetworkLink:

<<FeatureType>>

Gas network link that may consist of a liner "conveying" pipe running within an older, now "carrier" pipe. The network asset dimensions pertain to whichever pipe directly conveys gas.

Created on 06/08/2019. Last modified 03/10/2021

ATTRIBUTES
<div data-bbox="180 1485 807 1545">  mahp : Boolean Public = false  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False ) </div> <div data-bbox="180 1570 248 1599"> <b>mahp:</b> </div> <div data-bbox="180 1624 272 1653"> <b>Optional</b> </div> <div data-bbox="180 1680 762 1709"> Is this asset classified as a Major Accident Hazard Pipeline? </div> <div data-bbox="954 1709 1410 1738"> [ Is static True. Containment is Not Specified. ] </div>
<div data-bbox="180 1792 807 1852">  materialGrade : MaterialGradeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False ) </div> <div data-bbox="180 1877 341 1906"> <b>materialGrade:</b> </div> <div data-bbox="180 1930 272 1960"> <b>Optional</b> </div> <div data-bbox="180 1986 574 2016"> What is the material grade for this asset? </div> <div data-bbox="180 2040 919 2069"> Values for this attribute are defined in the &lt;&lt;MaterialGradeValue&gt;&gt; codelist. </div>

ATTRIBUTES	
[ Is static True. Containment is Not Specified. ]	
 slabbing : Boolean Public = false Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>slabbing:</b>	
<b>Optional</b>	
Is this asset protected by slabbing?	[ Is static True. Containment is Not Specified. ]
 tape : Boolean Public = false Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>tape:</b>	
<b>Optional</b>	
Is tape present above this asset?	[ Is static True. Containment is Not Specified. ]

#### 1.4.6.9 GasNetworkLinkZoneOfInterest

Class «FeatureType» in package 'Gas Network'

##### GasNetworkLinkZoneOfInterest

A Zone of Interest for a gas conveyance link.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.6.10 GasNetworkNode

Class «FeatureType» in package 'Gas Network'

##### GasNetworkNode:

<<FeatureType>>

Gas network node asset connecting GasPipes and/or performing another network function

Created on 06/08/2019. Last modified 03/10/2021

#### 1.4.6.11 GasNetworkNodeZoneOfInterest

Class «FeatureType» in package 'Gas Network'

##### GasNetworkNodeZoneOfInterest

A Zone of Interest for a gas conveyance node.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.6.12 GasPhysicalProtectionObject

Class «FeatureType» in package 'Gas Network'

##### GasPhysicalProtectionObject

A Physical Protection object accessorising a Gas network feature.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.6.13 GasServiceArea

*Class «FeatureType» in package 'Gas Network'*

##### **GasServiceArea**

A Service Area for a Gas network.

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.6.14 GasSite

*Class «FeatureType» in package 'Gas Network'*

##### **GasSite:**

*<<FeatureType>>*

Gas network facility containing other network assets that may be secured

Created on 06/08/2019. Last modified 23/11/2021

#### 1.4.6.15 GasSiteZoneOfInterest

*Class «FeatureType» in package 'Gas Network'*

##### **GasSiteZoneOfInterest**

A Zone of Interest for a gas site.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.6.16 GasSupportObject

*Class «FeatureType» in package 'Gas Network'*

##### **GasSupportObject**

A Support object accessorising a Gas network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.7 Reference Data

*Package in package 'NHDM-NUARData'*

The Reference Data package comprises sub-packages containing logical data model entities representing reference data which may be useful for the planning and execution of excavations. This logical data model is intended for generating physical data models

### 1.4.7.1 Planning Areas

*Package in package 'Reference Data'*

Planning Areas  
Version 2.1.2 Published  
Created on 30/03/2022. Last modified 28/07/2024

#### 1.4.7.1.1 Planning Areas diagram

*GML diagram in package 'Planning Areas'*

Planning Areas  
Version 2.1.1  
Created on 30/03/2022. Last modified 27/07/2024

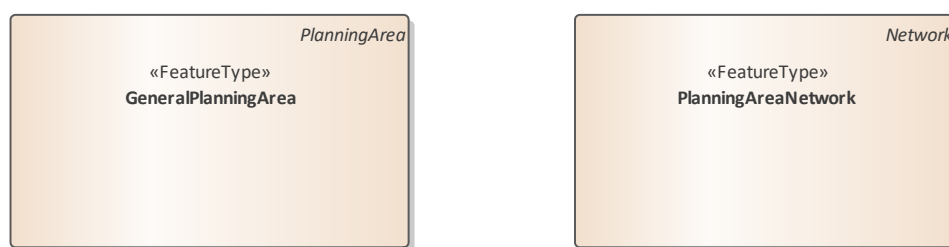


Figure 13: Planning Areas

#### 1.4.7.1.2 Historical Land Use

*Package in package 'Planning Areas'*

The Historical Land Use package comprises logical data model entities representing reference datasets that indicate areas whose historical use may have repercussions for safe digging. This logical data model is intended for generating physical data models through ShapeChange and Enterprise Architect as GML schema and ArcGIS XML.

Historical Land Use  
Version 2.1.2 Published  
Created on 15/10/2020. Last modified 28/07/2024

#### 1.4.7.1.2.1 Historical Land Use diagram

*Class diagram in package 'Historical Land Use'*

Historical Land Use  
Version 2.1.1  
Created on 15/10/2020. Last modified 06/02/2024

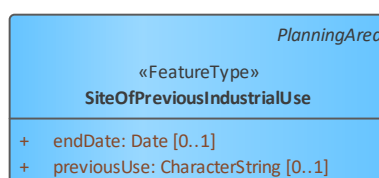


Figure 14: Historical Land Use



#### 1.4.7.1.2.2 SiteOfPreviousIndustrialUse



*Class «FeatureType» in package 'Historical Land Use'*

##### SiteOfPreviousIndustrialUse:

<<FeatureType>>

Planning Area with a history and possible artefacts or effects of industrial use

Created on 06/08/2019. Last modified 28/07/2022

ATTRIBUTES	
 endDate : Date Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>endDate:</b> <b>Optional</b> Date upon which the previous use ceased	[ Is static True. Containment is Not Specified. ]
 previousUse : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>previousUse:</b> <b>Optional</b> Description of the previous use of the site	
Properties: length = 255	[ Is static True. Containment is Not Specified. ]

#### 1.4.7.1.3 Protected Sites

*Package in package 'Planning Areas'*

The Protected Sites package comprises logical data model entities representing designated administrative regions requiring special treatment or enforcing certain policies with regard to safe digging planning and execution. This logical data model is intended for generating physical data models through ShapeChange and Enterprise Architect as GML schema and ArcGIS XML

Protected Sites  
Version 2.1.2 Published  
Created on 15/10/2020. Last modified 28/07/2024

##### 1.4.7.1.3.1 Protected Sites diagram

*Class diagram in package 'Protected Sites'*

Protected Sites  
Version 2.1.1  
Created on 15/10/2020. Last modified 02/08/2024

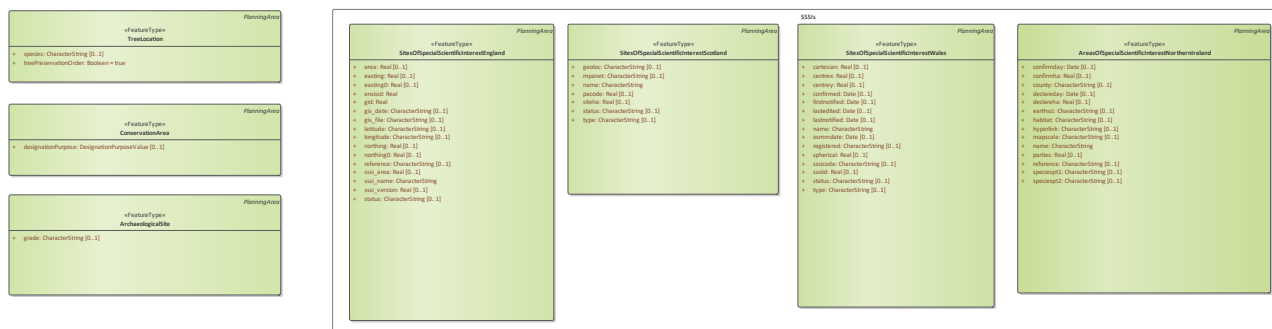


Figure 15: Protected Sites

### 1.4.7.1.3.2 ArchaeologicalSite

Class «FeatureType» in package 'Protected Sites'

#### Archaeological Site:

<<FeatureType>>

Planning Area with defined archaeological value or sensitivity

Created on 06/08/2019. Last modified 28/07/2022

#### ATTRIBUTES

grade : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

#### grade:

#### Optional

Tier number of Archaeological Priority Areas

Properties:

length = 25

[ Is static True. Containment is Not Specified. ]

### 1.4.7.1.3.3 ConservationArea

Class «FeatureType» in package 'Protected Sites'

#### ConservationArea:

<<FeatureType>>

Planning Area with a designated conservation purpose and sensitivity

Created on 06/08/2019. Last modified 28/07/2022

#### ATTRIBUTES

designationPurpose : DesignationPurposeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

#### designationPurpose:

#### Optional

Purpose of the designation.

Values for this attribute are defined in the <<DesignationPurposeValue>> codelist

[ Is static True. Containment is Not Specified. ]

### 1.4.7.1.3.4 AreasOfSpecialScientificInterestNorthernIreland

Class «FeatureType» in package 'Protected Sites'

### AreasOfSpecialScientificInterestNorthernIreland:

<<FeatureType>>

A Planning Area formally designated as of special scientific interest in Northern Ireland

Created on 15/10/2020. Last modified 03/10/2021

ATTRIBUTES	
 <b>confirmday</b> : Date Public Alias: CONFIRMDAY Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>confirmha</b> : Real Public Alias: CONMFIRM_HA Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>county</b> : CharacterString Public Alias: COUNTY Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 70	[ Is static True. Containment is Not Specified. ]
 <b>declareday</b> : Date Public Alias: DECLAREDAY Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>declareha</b> : Real Public Alias: DECLARE_HA Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>earthsci</b> : CharacterString Public Alias: EARTH_SCI Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 254	[ Is static True. Containment is Not Specified. ]
 <b>habitat</b> : CharacterString Public Alias: HABITAT Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 254	[ Is static True. Containment is Not Specified. ]
 <b>hyperlink</b> : CharacterString Public Alias: Hyperlink Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 150	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 <b>mapscale</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>MAP_SCALE</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 40	[ Is static True. Containment is Not Specified. ]
 <b>name</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>NAME</b>  Properties: length = 60	[ Is static True. Containment is Not Specified. ]
 <b>parties</b> : <b>Real</b> <b>Public</b> Alias: <b>PARTIES</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>reference</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>REFERENCE</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 10	[ Is static True. Containment is Not Specified. ]
 <b>speciespt1</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>SPECIESPT1</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 254	[ Is static True. Containment is Not Specified. ]
 <b>speciespt2</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>SPECIESPT2</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 254	[ Is static True. Containment is Not Specified. ]

#### 1.4.7.1.3.5 SitesOfSpecialScientificInterestEngland

Class «FeatureType» in package 'Protected Sites'

##### SitesOfSpecialScientificInterestEngland:







<<FeatureType>>

A Planning Area formally designated as of special scientific interest in England

Created on 01/08/2024. Last modified 01/08/2024

ATTRIBUTES	
 <b>area</b> : <b>Real</b> <b>Public</b>	

ATTRIBUTES	
Alias: AREA Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 easting : Real Public Alias: EASTING Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 easting0 : Real Public Alias: EASTING0 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 ensisid : Real Public Alias: ENSISID	[ Is static True. Containment is Not Specified. ]
 gid : Real Public Alias: GID	[ Is static True. Containment is Not Specified. ]
 gis_date : CharacterString Public Alias: GIS_DATE Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 8	[ Is static True. Containment is Not Specified. ]
 gis_file : CharacterString Public Alias: GIS_FILE Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 1	[ Is static True. Containment is Not Specified. ]
 latitude : CharacterString Public Alias: LATITUDE Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 9	[ Is static True. Containment is Not Specified. ]
 longitude : CharacterString Public Alias: LONGITUDE Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 9	[ Is static True. Containment is Not Specified. ]
 northing : Real Public Alias: NORTHING Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 <b>northing0</b> : Real Public Alias: <b>NORTHING0</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>reference</b> : CharacterString Public Alias: <b>REFERENCE</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 8	[ Is static True. Containment is Not Specified. ]
 <b>sssi_area</b> : Real Public Alias: <b>SSSI_AREA</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>sssi_name</b> : CharacterString Public Alias: <b>SSSI_NAME</b>  Properties: length = 60	[ Is static True. Containment is Not Specified. ]
 <b>sssi_version</b> : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>status</b> : CharacterString Public Alias: <b>STATUS</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 8	[ Is static True. Containment is Not Specified. ]

#### 1.4.7.1.3.6 SitesOfSpecialScientificInterestScotland


Class «FeatureType» in package 'Protected Sites'

##### SitesOfSpecialScientificInterestScotland:

<<FeatureType>>

A Planning Area formally designated as of special scientific interest in Scotland

Created on 15/10/2020. Last modified 03/10/2021

ATTRIBUTES	
 <b>geoloc</b> : CharacterString Public Alias: <b>GEO_LOC</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 15	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 <b>mpanet</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>MPA_NET</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 1	[ Is static True. Containment is Not Specified. ]
 <b>name</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>NAME</b>  Properties: length = 255	[ Is static True. Containment is Not Specified. ]
 <b>pacode</b> : <b>Real</b> <b>Public</b> Alias: <b>PA_CODE</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>siteha</b> : <b>Real</b> <b>Public</b> Alias: <b>SITE_HA</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>status</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>STATUS</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 200	[ Is static True. Containment is Not Specified. ]
 <b>type</b> : <b>CharacterString</b> <b>Public</b> Alias: <b>TYPE</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 45	[ Is static True. Containment is Not Specified. ]

#### 1.4.7.1.3.7 SitesOfSpecialScientificInterestWales

Class «FeatureType» in package 'Protected Sites'

##### SitesOfSpecialScientificInterestWales:

<<FeatureType>>

A Planning Area formally designated as of special scientific interest in Wales

Created on 15/10/2020. Last modified 03/10/2021

ATTRIBUTES
 <b>cartesian</b> : <b>Real</b> <b>Public</b> Alias: <b>Cartesian_</b> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
 <b>centrex</b> : Real Public Alias: Centre_X Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>centrey</b> : Real Public Alias: Centre_Y Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>confirmed</b> : Date Public Alias: Confirmed Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>firstnotified</b> : Date Public Alias: First_Noti Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>lastedited</b> : Date Public Alias: Last_Edite Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>lastnotified</b> : Date Public Alias: Last_Notif Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>name</b> : CharacterString Public Alias: SSSI_NAME  Properties: length = 120	[ Is static True. Containment is Not Specified. ]
 <b>osmmdate</b> : Date Public Alias: OSMM_Date Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>registered</b> : CharacterString Public Alias: Registered Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 10	[ Is static True. Containment is Not Specified. ]
 <b>spherical</b> : Real Public Alias: Spherical_ Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]



ATTRIBUTES	
 <b>sssiCode</b> : CharacterString Public Alias: SSSI_Code Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 10	[ Is static True. Containment is Not Specified. ]
 <b>sssiid</b> : Real Public Alias: SSSI_ID Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>status</b> : CharacterString Public Alias: Status Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 20	[ Is static True. Containment is Not Specified. ]
 <b>type</b> : CharacterString Public Alias: Type Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  Properties: length = 12	[ Is static True. Containment is Not Specified. ]

#### 1.4.7.1.3.8 TreeLocation



Class «FeatureType» in package 'Protected Sites'

##### TreeLocation:

<<FeatureType>>

Planning Area designated to indicate the presence of a tree that would be of interest for the planning of excavation works.

Created on 06/08/2019. Last modified 13/10/2022

ATTRIBUTES	
 <b>species</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>species:</b> <b>Optional</b> The species of the tree.  Properties: length = 100	[ Is static True. Containment is Not Specified. ]
 <b>treePreservationOrder</b> : Boolean Public = true  <b>treePreservationOrder:</b> <b>Mandatory</b> <b>Default=TRUE</b> A flag indicating whether this feature represents a Tree Preservation Order.	[ Is static True. Containment is Not Specified. ]

#### 1.4.7.1.4 Restricted Sites

*Package in package 'Planning Areas'*

Restricted Sites  
Version 2.1.2 Published  
Created on 30/03/2022. Last modified 28/07/2024

##### 1.4.7.1.4.1 Restricted Sites diagram

*GML diagram in package 'Restricted Sites'*

Restricted Sites  
Version 2.1.1  
Created on 30/03/2022. Last modified 06/02/2024

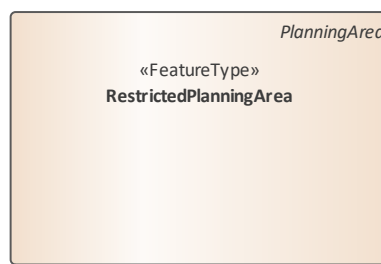


Figure 16: Restricted Sites

##### 1.4.7.1.4.2 RestrictedPlanningArea

*Class «FeatureType» in package 'Restricted Sites'*

**RestrictedPlanningArea:**

<<FeatureType>>

Representation of an area of zone within which various levels of restriction may be applied to proposed works for reasons of security, disruption etc.

Created on 11/03/2022. Last modified 28/07/2022

##### 1.4.7.1.5 GeneralPlanningArea

*Class «FeatureType» in package 'Planning Areas'*

**GeneralPlanningArea:**

<<FeatureType>>

Defined area with characteristics relevant to excavation planning

Created on 11/03/2022. Last modified 28/07/2022

##### 1.4.7.1.6 PlanningAreaNetwork

*Class «FeatureType» in package 'Planning Areas'*

**PlanningAreaNetwork**

<<FeatureType>>

A network relating to Planning Areas.

Created on 06/02/2024. Last modified 23/03/2024

## 1.4.8 Sewer Network

*Package in package 'NHDM-NUARData'*

The Sewer Network package comprises logical data model entities representing sewer utility infrastructure assets above and below ground. This logical data model is intended for generating physical data models

Sewer Network  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

### 1.4.8.1 Sewer Network diagram

*GML diagram in package 'Sewer Network'*

Sewer Network  
Version 2.1.1  
Created on 06/08/2019. Last modified 27/07/2024

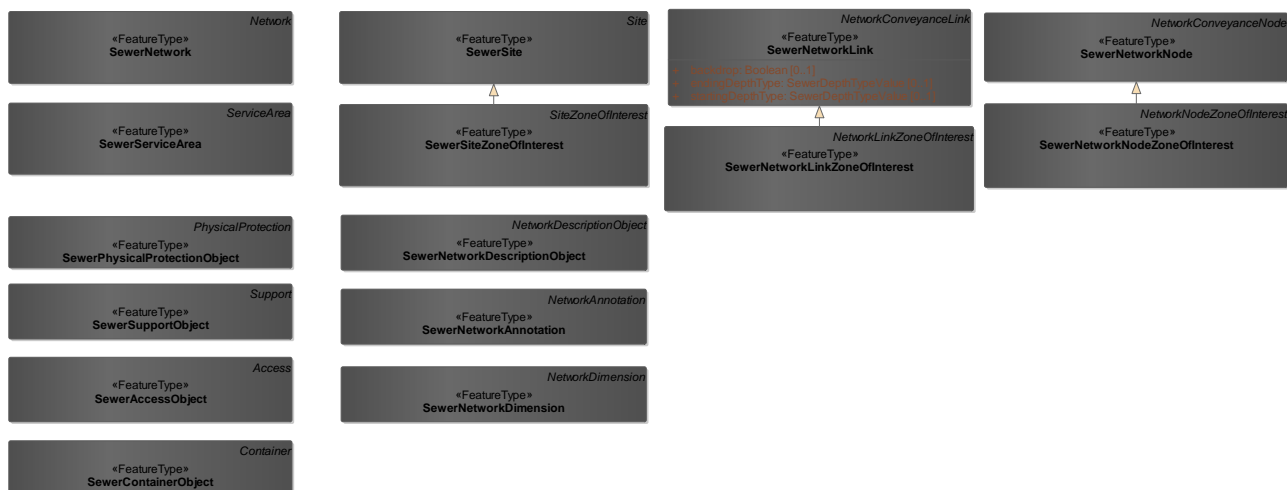


Figure 17: Sewer Network

### 1.4.8.2 SewerAccessObject

*Class «FeatureType» in package 'Sewer Network'*

**SewerAccessObject**

An Access object accessorising a Sewer network feature.

Created on 21/08/2021. Last modified 21/01/2022

### 1.4.8.3 SewerContainerObject

*Class «FeatureType» in package 'Sewer Network'*

### **SewerContainerObject**

A Container object containing a Sewer network feature.

Created on 22/10/2021. Last modified 23/11/2021

### **1.4.8.4 SewerNetwork**

*Class «FeatureType» in package 'Sewer Network'*

#### **SewerNetwork**

A network in the Sewer domain.

Created on 27/07/2024. Last modified 27/07/2024

### **1.4.8.5 SewerNetworkAnnotation**

*Class «FeatureType» in package 'Sewer Network'*

#### **SewerNetworkAnnotation:**

**<<FeatureType>>**

A textual description of an element of a sewer network.

Created on 21/01/2022. Last modified 21/01/2022

### **1.4.8.6 SewerNetworkDescriptionObject**

*Class «FeatureType» in package 'Sewer Network'*

#### **SewerNetworkDescriptionObject:**

**<<FeatureType>>**

An artefact that describes an element of a sewer network.

Created on 21/01/2022. Last modified 21/01/2022

### **1.4.8.7 SewerNetworkDimension**

*Class «FeatureType» in package 'Sewer Network'*

#### **SewerNetworkDimension:**

**<<FeatureType>>**

A descriptive element that describes a measurement of a sewer network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

### **1.4.8.8 SewerNetworkLink**

*Class «FeatureType» in package 'Sewer Network'*


#### **SewerNetworkLink:**

**<<FeatureType>>**

Sewer network links conveying sewage between nodes.

Created on 06/08/2019. Last modified 03/10/2021

<b>ATTRIBUTES</b>
-------------------

ATTRIBUTES
<p> backdrop : Boolean Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>backdrop:</b> <b>Optional</b> Indicates whether the start of the pipe is lower than the end. [ Is static True. Containment is Not Specified. ]</p>
<p> endingDepthType : SewerDepthTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>endingDepthType:</b> <b>Optional</b> Indicates whether the ending pipe depth refers to the invert rather than the top-of-asset depth. [ Is static True. Containment is Not Specified. ]</p>
<p> startingDepthType : SewerDepthTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>startingDepthType:</b> <b>Optional</b> Indicates whether the starting pipe depth refers to the invert rather than the top-of-asset depth. [ Is static True. Containment is Not Specified. ]</p>

#### 1.4.8.9 SewerNetworkLinkZoneOfInterest

*Class «FeatureType» in package 'Sewer Network'*

##### SewerNetworkLinkZoneOfInterest

A Zone of Interest for a sewer conveyance link.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.8.10 SewerNetworkNode

*Class «FeatureType» in package 'Sewer Network'*

##### SewerNetworkNode:

<<FeatureType>>

Sewer network nodes that connect sewer conveyance links and/or perform other functions in the network.

Created on 06/08/2019. Last modified 23/11/2021

#### 1.4.8.11 SewerNetworkNodeZoneOfInterest

*Class «FeatureType» in package 'Sewer Network'*

##### SewerNetworkNodeZoneOfInterest

A Zone of Interest for a sewer conveyance node.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.8.12 SewerPhysicalProtectionObject

*Class «FeatureType» in package 'Sewer Network'*

##### **SewerPhysicalProtectionObject**

A Physical Protection object accessorising a Sewer network feature.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.8.13 SewerServiceArea

*Class «FeatureType» in package 'Sewer Network'*

##### **SewerServiceArea**

A Service Area for a Sewer network.

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.8.14 SewerSite

*Class «FeatureType» in package 'Sewer Network'*

##### **SewerSite:**

*<<FeatureType>>*

Sewer network facility containing other network assets that may be secured. Sewer sites may contain assets of both the Sewer and Water networks.

Created on 06/08/2019. Last modified 23/11/2021

#### 1.4.8.15 SewerSiteZoneOfInterest

*Class «FeatureType» in package 'Sewer Network'*

##### **SewerSiteZoneOfInterest**

A Zone of Interest for a sewer site.

Created on 22/10/2021. Last modified 23/11/2021

#### 1.4.8.16 SewerSupportObject

*Class «FeatureType» in package 'Sewer Network'*

##### **SewerSupportObject**

A Support object accessorising a Sewer network feature.

Created on 22/10/2021. Last modified 23/11/2021

### 1.4.9 Telecommunications Network

*Package in package 'NHDM-NUARData'*

The Telecommunications Network package comprises logical data model entities representing telecommunications utility infrastructure assets above and below ground. This logical data model is intended for generating physical data models

Telecommunications Network  
 Version 2.1.2 Published  
 Created on 06/08/2019. Last modified 28/07/2024

### 1.4.9.1 Telecommunications Network diagram

GML diagram in package 'Telecommunications Network'

Telecommunications Network  
 Version 2.1.1  
 Created on 06/08/2019. Last modified 28/07/2024

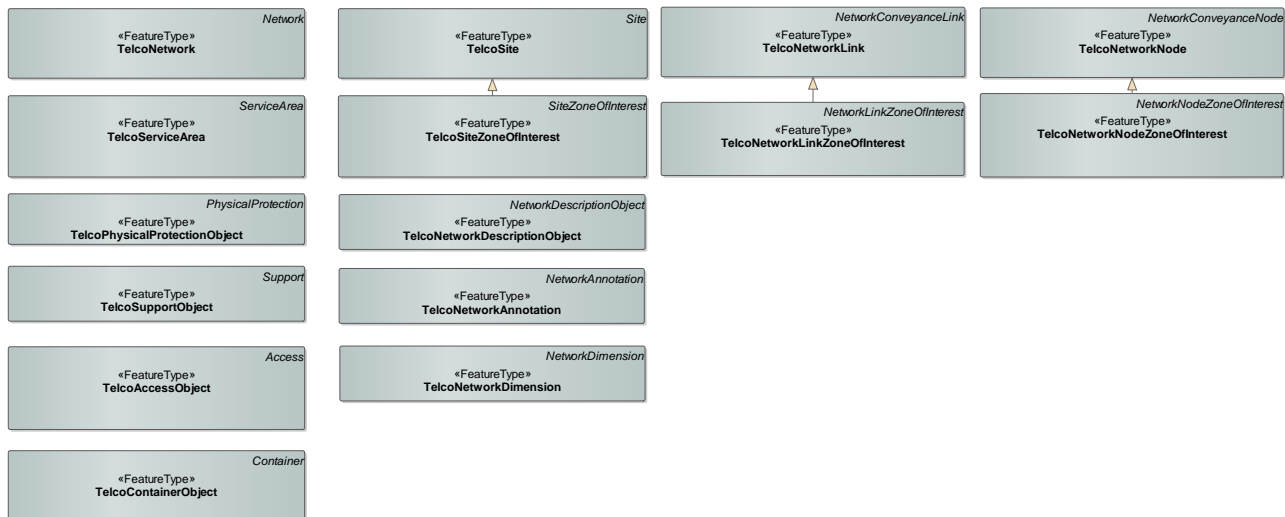


Figure 18: Telecommunications Network

### 1.4.9.2 TelcoAccessObject

Class «FeatureType» in package 'Telecommunications Network'

#### TelcoAccessObject

An Access object accessorising a telecoms network feature.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.9.3 TelcoContainerObject

Class «FeatureType» in package 'Telecommunications Network'

#### TelcoContainerObject:

<<FeatureType>>

Telecommunications network container assets through which one or more telco cables run and which may be nested as ducts and subducts.

Created on 22/08/2019. Last modified 23/11/2021

### 1.4.9.4 TelcoNetwork

Class «FeatureType» in package 'Telecommunications Network'

## **TelcoNetwork**

A network in the telecoms domain.

Created on 27/07/2024. Last modified 27/07/2024

### **1.4.9.5 TelcoNetworkAnnotation**

*Class «FeatureType» in package 'Telecommunications Network'*

#### **TelcoNetworkAnnotation:**

**<<FeatureType>>**

A textual description of an element of a telecoms network.

Created on 21/01/2022. Last modified 24/01/2022

### **1.4.9.6 TelcoNetworkDescriptionObject**

*Class «FeatureType» in package 'Telecommunications Network'*

#### **TelcoNetworkDescriptionObject:**

**<<FeatureType>>**

An artefact that describes an element of a telecoms network.

Created on 21/01/2022. Last modified 24/01/2022

### **1.4.9.7 TelcoNetworkDimension**

*Class «FeatureType» in package 'Telecommunications Network'*

#### **TelcoNetworkDimension:**

**<<FeatureType>>**

A descriptive element that describes a measurement of a telecoms network, or its position relative to another feature.

Created on 21/01/2022. Last modified 24/01/2022

### **1.4.9.8 TelcoNetworkLink**

*Class «FeatureType» in package 'Telecommunications Network'*

#### **TelcoNetworkLink:**

**<<FeatureType>>**

Telecommunications network link conveying voice and or data communications between telco structures.

Created on 06/08/2019. Last modified 03/10/2021

### **1.4.9.9 TelcoNetworkLinkZoneOfInterest**

*Class «FeatureType» in package 'Telecommunications Network'*

#### **TelcoNetworkLinkZoneOfInterest**

A Zone of Interest for a telecoms conveyance link.

Created on 25/10/2021. Last modified 23/11/2021

### **1.4.9.10 TelcoNetworkNode**



*Class «FeatureType» in package 'Telecommunications Network'*

**TelcoNetworkNode:**

**<<FeatureType>>**

Telecommunications network node connecting telco cables and/or providing additional network functions / connections.

Created on 06/08/2019. Last modified 03/10/2021

**1.4.9.11 TelcoNetworkNodeZoneOfInterest**

*Class «FeatureType» in package 'Telecommunications Network'*

**TelcoNetworkNodeZoneOfInterest**

A Zone of Interest for a telecoms conveyance node.

Created on 25/10/2021. Last modified 23/11/2021

**1.4.9.12 TelcoPhysicalProtectionObject**

*Class «FeatureType» in package 'Telecommunications Network'*

**TelcoPhysicalProtectionObject**

A Physical Protection object accessorising a telecom network feature.

Created on 25/10/2021. Last modified 23/11/2021

**1.4.9.13 TelcoServiceArea**

*Class «FeatureType» in package 'Telecommunications Network'*

**TelcoServiceArea**

A Service Area for a telecom network.

Created on 27/07/2024. Last modified 27/07/2024

**1.4.9.14 TelcoSite**

*Class «FeatureType» in package 'Telecommunications Network'*

**TelcoSite:**

**<<FeatureType>>**

Telecommunications network facility containing other telco network assets which may be secured

Created on 23/10/2019. Last modified 23/11/2021

**1.4.9.15 TelcoSiteZoneOfInterest**

*Class «FeatureType» in package 'Telecommunications Network'*

**TelcoSiteZoneOfInterest**

A Zone of Interest for a telecoms site.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.9.16 TelcoSupportObject

Class «FeatureType» in package 'Telecommunications Network'

#### TelcoSupportObject

A Support object accessorising a telecoms network feature.

Created on 25/10/2021. Last modified 23/11/2021

## 1.4.10 Thermal Network

Package in package 'NHDM-NUARData'

The Thermal Network package comprises logical data model entities representing thermal network infrastructure assets for heating and cooling systems above and below ground. This logical data model is intended for generating physical data models

Thermal Network  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

### 1.4.10.1 Thermal Network diagram

Class diagram in package 'Thermal Network'

Thermal Network  
Version 2.1.1  
Created on 06/08/2019. Last modified 28/07/2024

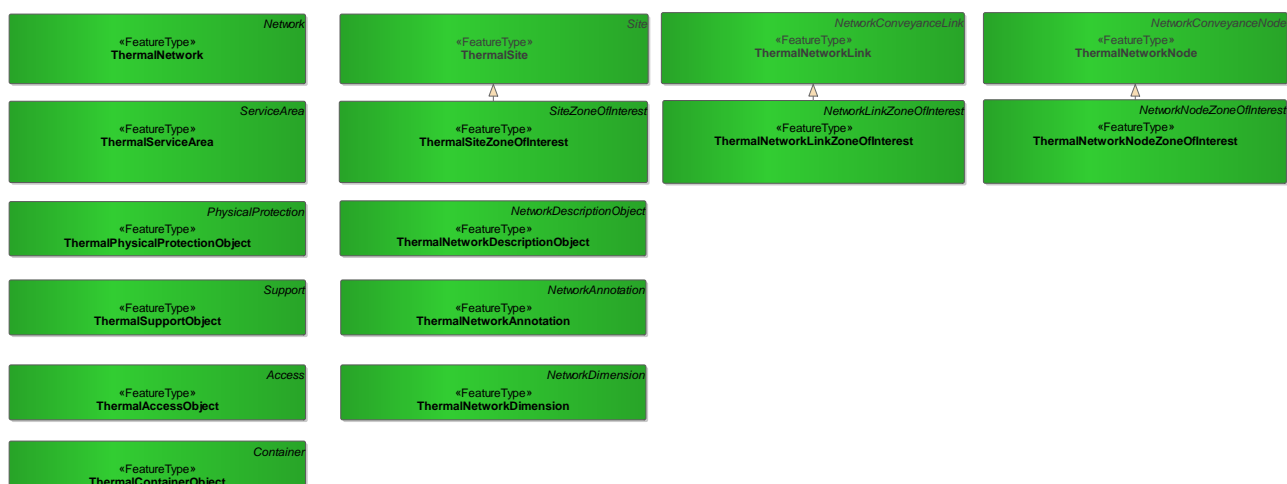


Figure 19: Thermal Network

### 1.4.10.2 ThermalAccessObject

Class «FeatureType» in package 'Thermal Network'

#### ThermalAccessObject

An Access object accessorising a Thermal network feature.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.10.3 ThermalContainerObject

*Class «FeatureType» in package 'Thermal Network'*

#### **ThermalContainerObject**

A Container object containing a Thermal network feature.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.10.4 ThermalNetwork

*Class «FeatureType» in package 'Thermal Network'*

#### **ThermalNetwork**

A thermal network, such as a district heating scheme.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.10.5 ThermalNetworkAnnotation

*Class «FeatureType» in package 'Thermal Network'*

#### **ThermalNetworkAnnotation:**

**<<FeatureType>>**

A textual description of an element of a thermal network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.10.6 ThermalNetworkDescriptionObject

*Class «FeatureType» in package 'Thermal Network'*

#### **ThermalNetworkDescriptionObject:**

**<<FeatureType>>**

An artefact that describes an element of a thermal network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.10.7 ThermalNetworkDimension

*Class «FeatureType» in package 'Thermal Network'*

#### **ThermalNetworkDimension:**

**<<FeatureType>>**

A descriptive element that describes a measurement of a thermal network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.10.8 ThermalNetworkLink

*Class «FeatureType» in package 'Thermal Network'*

#### **ThermalNetworkLink:**

**<<FeatureType>>**

A link in a thermal network

Created on 03/10/2021. Last modified 03/10/2021

#### **1.4.10.9 ThermalNetworkLinkZoneOfInterest**

*Class «FeatureType» in package 'Thermal Network'*

##### **ThermalNetworkLinkZoneOfInterest**

A Zone of Interest for a thermal conveyance link.

Created on 25/10/2021. Last modified 23/11/2021

#### **1.4.10.10 ThermalNetworkNode**

*Class «FeatureType» in package 'Thermal Network'*

##### **ThermalNetworkNode:**

*<<FeatureType>>*

A node in a thermal network

Created on 03/10/2021. Last modified 03/10/2021

#### **1.4.10.11 ThermalNetworkNodeZoneOfInterest**

*Class «FeatureType» in package 'Thermal Network'*

##### **ThermalNetworkNodeZoneOfInterest**

A Zone of Interest for a thermal conveyance node.

Created on 25/10/2021. Last modified 23/11/2021

#### **1.4.10.12 ThermalPhysicalProtectionObject**

*Class «FeatureType» in package 'Thermal Network'*

##### **ThermalPhysicalProtectionObject**

A Physical Protection object accessorising a Thermal network feature.

Created on 25/10/2021. Last modified 23/11/2021

#### **1.4.10.13 ThermalServiceArea**

*Class «FeatureType» in package 'Thermal Network'*

##### **ThermalServiceArea**

A Service Area for a Thermal network.

Created on 27/07/2024. Last modified 27/07/2024

#### **1.4.10.14 ThermalSite**

*Class «FeatureType» in package 'Thermal Network'*

**ThermalSite:**<<*FeatureType*>>

A site in a thermal network

Created on 03/10/2021. Last modified 23/11/2021

**1.4.10.15 ThermalSiteZoneOfInterest***Class «FeatureType» in package 'Thermal Network'***ThermalSiteZoneOfInterest**

A Zone of Interest for a thermal site.

Created on 25/10/2021. Last modified 23/11/2021

**1.4.10.16 ThermalSupportObject***Class «FeatureType» in package 'Thermal Network'***ThermalSupportObject**

A Support object accessorising a Thermal network feature.

Created on 25/10/2021. Last modified 23/11/2021

**1.4.11 Transport***Package in package 'NHDM-NUARData'*

The Transport Network package comprises logical data model entities representing transport infrastructure assets above and below ground. This logical data model is intended for generating physical data models

Transport  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

**1.4.11.1 Transport diagram***Class diagram in package 'Transport'*

Transport

Version 2.1.1

Created on 06/08/2019. Last modified 27/07/2024

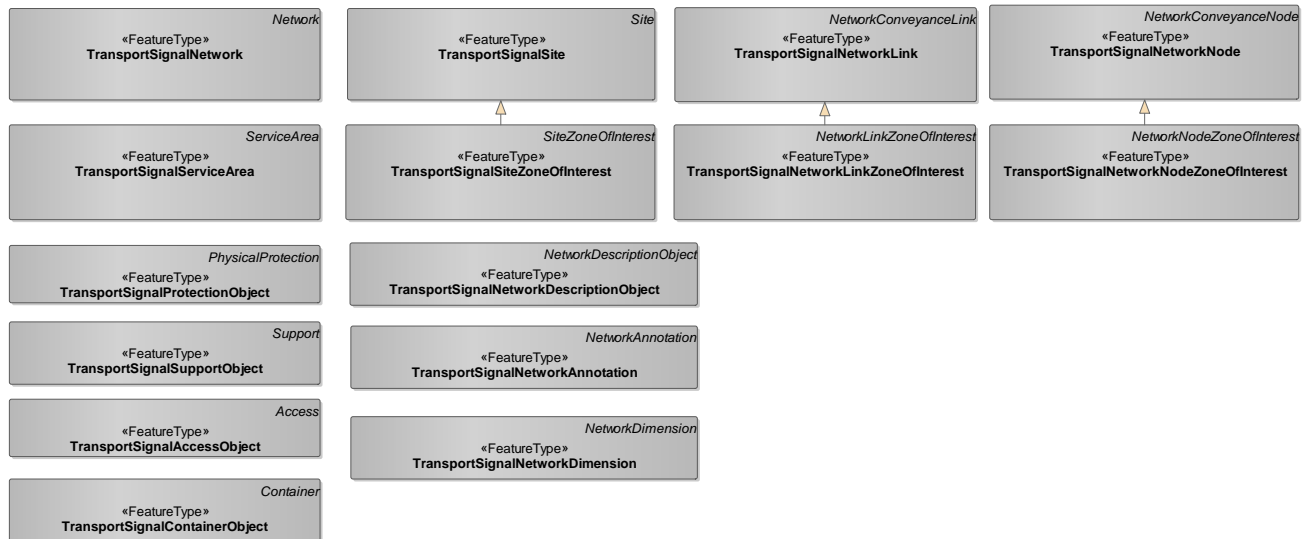


Figure 20: Transport

### 1.4.11.2 TransportSignalAccessObject

Class «FeatureType» in package 'Transport'

#### TransportSignalAccessObject

An Access object accessorising a Transport Signalling network feature.

Created on 25/10/2021. Last modified 24/01/2022

### 1.4.11.3 TransportSignalContainerObject

Class «FeatureType» in package 'Transport'

#### TransportSignalContainerObject

A Container object containing a Transport Signalling network feature.

Created on 25/10/2021. Last modified 24/01/2022

### 1.4.11.4 TransportSignalNetwork

Class «FeatureType» in package 'Transport'

#### TransportSignalNetwork

A signalling network in the Transport domain.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.11.5 TransportSignalNetworkAnnotation

Class «FeatureType» in package 'Transport'

#### TransportSignalNetworkAnnotation:

<<FeatureType>>

A textual description of an element of a transport signalling network.

Created on 21/01/2022. Last modified 24/01/2022

### 1.4.11.6 TransportSignalNetworkDescriptionObject

*Class «FeatureType» in package 'Transport'*

#### **TransportSignalNetworkDescriptionObject:**

**<<FeatureType>>**

An artefact that describes an element of a transport signalling network.

Created on 21/01/2022. Last modified 24/01/2022

### 1.4.11.7 TransportSignalNetworkDimension

*Class «FeatureType» in package 'Transport'*

#### **TransportSignalNetworkDimension:**

**<<FeatureType>>**

A descriptive element that describes a measurement of a transport signalling network, or its position relative to another feature.

Created on 21/01/2022. Last modified 24/01/2022

### 1.4.11.8 TransportSignalNetworkLink

*Class «FeatureType» in package 'Transport'*

#### **TransportSignalNetworkLink:**

**<<FeatureType>>**

Signalling network link asset that conveys signals for a transport network

Created on 06/08/2019. Last modified 24/01/2022

### 1.4.11.9 TransportSignalNetworkLinkZoneOfInterest

*Class «FeatureType» in package 'Transport'*

#### **TransportSignalNetworkLinkZoneOfInterest**

A Zone of Interest for a Transport Signalling conveyance link.

Created on 25/10/2021. Last modified 24/01/2022

### 1.4.11.10 TransportSignalNetworkNode

*Class «FeatureType» in package 'Transport'*

#### **TransportSignalNetworkNode:**

**<<FeatureType>>**

Signalling network node asset that conveys signals for a transport network.

Created on 06/08/2019. Last modified 24/01/2022

### 1.4.11.11 TransportSignalNetworkNodeZoneOfInterest

*Class «FeatureType» in package 'Transport'*

#### **TransportSignalNetworkNodeZoneOfInterest**

A Zone of Interest for a Transport Signalling conveyance node.

Created on 25/10/2021. Last modified 24/01/2022

#### **1.4.11.12 TransportSignalProtectionObject**

*Class «FeatureType» in package 'Transport'*

##### **TransportSignalProtectionObject**

A Physical Protection object accessorising a Transport Signalling network feature.

Created on 25/10/2021. Last modified 24/01/2022

#### **1.4.11.13 TransportSignalServiceArea**

*Class «FeatureType» in package 'Transport'*

##### **TransportSignalServiceArea**

A Service Area for a transport signalling network.

Created on 27/07/2024. Last modified 27/07/2024

#### **1.4.11.14 TransportSignalSite**

*Class «FeatureType» in package 'Transport'*

##### **TransportSignalSite:**

*<<FeatureType>>*

Transport signalling network facility that comprises other network assets and may be secured

Created on 06/08/2019. Last modified 24/01/2022

#### **1.4.11.15 TransportSignalSiteZoneOfInterest**

*Class «FeatureType» in package 'Transport'*

##### **TransportSignalSiteZoneOfInterest**

A Zone of Interest for a Transport Signalling site.

Created on 25/10/2021. Last modified 24/01/2022

#### **1.4.11.16 TransportSignalSupportObject**

*Class «FeatureType» in package 'Transport'*

##### **TransportSignalSupportObject**

A Support object accessorising a Transport Signalling network feature.

Created on 25/10/2021. Last modified 24/01/2022

### **1.4.12 Water Network**

*Package in package 'NHDM-NUARData'*



The Water Network package comprises logical data model entities representing water utility infrastructure assets above and below ground. This logical data model is intended for generating physical data models

Water Network  
Version 2.1.2 Published  
Created on 06/08/2019. Last modified 28/07/2024

### 1.4.12.1 Water Network diagram

*Class diagram in package 'Water Network'*

Water Network  
Version 2.1.1  
Created on 06/08/2019. Last modified 27/07/2024

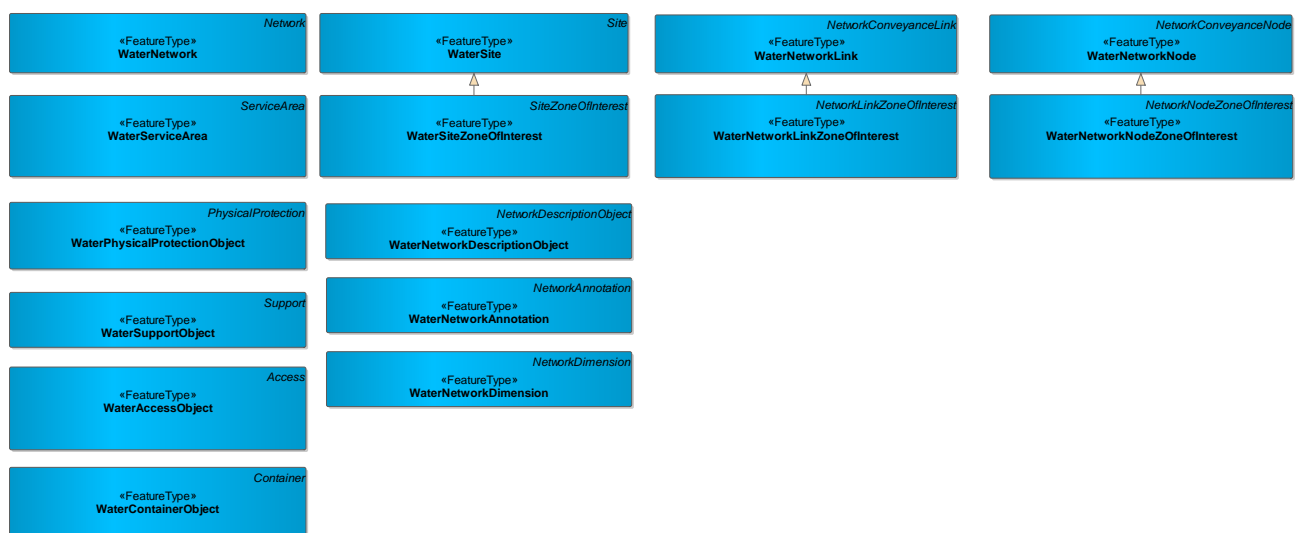


Figure 21: Water Network

### 1.4.12.2 WaterAccessObject

*Class «FeatureType» in package 'Water Network'*

#### WaterAccessObject

An Access object accessorising a Water network feature.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.12.3 WaterContainerObject

*Class «FeatureType» in package 'Water Network'*

#### WaterContainerObject

A Container object containing a Water network feature.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.12.4 WaterNetwork

*Class «FeatureType» in package 'Water Network'*

#### **WaterNetwork**

A network in the Water domain.

Created on 27/07/2024. Last modified 27/07/2024

### 1.4.12.5 WaterNetworkAnnotation

*Class «FeatureType» in package 'Water Network'*

#### **WaterNetworkAnnotation:**

**<<FeatureType>>**

A textual description of an element of a water network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.12.6 WaterNetworkDescriptionObject

*Class «FeatureType» in package 'Water Network'*

#### **WaterNetworkDescriptionObject:**

**<<FeatureType>>**

An artefact that describes an element of a water network.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.12.7 WaterNetworkDimension

*Class «FeatureType» in package 'Water Network'*

#### **WaterNetworkDimension:**

**<<FeatureType>>**

A descriptive element that describes a measurement of a water network, or its position relative to another feature.

Created on 21/01/2022. Last modified 21/01/2022

### 1.4.12.8 WaterNetworkLink

*Class «FeatureType» in package 'Water Network'*

#### **WaterNetworkLink:**

**<<FeatureType>>**

Network link asset on the Water Network that conveys water between nodes.

Created on 06/08/2019. Last modified 03/10/2021

### 1.4.12.9 WaterNetworkLinkZoneOfInterest

*Class «FeatureType» in package 'Water Network'*

#### **WaterNetworkLinkZoneOfInterest**

A Zone of Interest for a water conveyance link.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.12.10 WaterNetworkNode

*Class «FeatureType» in package 'Water Network'*

##### **WaterNetworkNode:**

**<<FeatureType>>**

Network node asset on the Water Network that links Water Network Links together and/or performs an action on the network e.g. valve, measuring device.

Created on 22/08/2019. Last modified 03/10/2021

#### 1.4.12.11 WaterNetworkNodeZoneOfInterest

*Class «FeatureType» in package 'Water Network'*

##### **WaterNetworkNodeZoneOfInterest**

A Zone of Interest for a water conveyance node.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.12.12 WaterPhysicalProtectionObject

*Class «FeatureType» in package 'Water Network'*

##### **WaterPhysicalProtectionObject**

A Physical Protection object accessorising a Water network feature.

Created on 25/10/2021. Last modified 23/11/2021

#### 1.4.12.13 WaterServiceArea

*Class «FeatureType» in package 'Water Network'*

##### **WaterServiceArea**

A Service Area for a Water network.

Created on 27/07/2024. Last modified 27/07/2024

#### 1.4.12.14 WaterSite

*Class «FeatureType» in package 'Water Network'*

##### **WaterSite:**

**<<FeatureType>>**

Network facility on a Water Network that comprises other network assets and may be a secured area.

Created on 23/10/2019. Last modified 23/11/2021

#### 1.4.12.15 WaterSiteZoneOfInterest

*Class «FeatureType» in package 'Water Network'*

##### **WaterSiteZoneOfInterest**

A Zone of Interest for a water site.

Created on 25/10/2021. Last modified 23/11/2021

### 1.4.12.16 WaterSupportObject

Class «FeatureType» in package 'Water Network'

#### WaterSupportObject

A Support object accessorising a Water network feature.

Created on 25/10/2021. Last modified 23/11/2021

#### ABSTRACT

### 1.4.13 Access




Class «FeatureType» in package 'NHDM-NUARData'

#### Access:

<<FeatureType>>

Object that has a role in providing access to an asset in a utility network

Created on 19/08/2021. Last modified 27/07/2022

ATTRIBUTES
<p> <b>accessSubType</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>accessSubType:</b> <b>Optional</b> A free-text equivalent of the <b>accessType</b> attribute value which may be used to reflect a source data value which is not precisely represented in the &lt;AccessTypeValue&gt; codelist [ Is static True. Containment is Not Specified. ]</p>
<p> <b>accessType</b> : AccessTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>accessType:</b> <b>Mandatory (by convention)</b> The type of the access object. The values for this attribute are defined in the &lt;AccessTypeValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>numberOfCovers</b> : Integer Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>numberOfCovers:</b> <b>Optional</b> The number of covers exposed by the access object [ Is static True. Containment is Not Specified. ]</p>

### 1.4.14 CharacterStringArray

Class «Type» in package 'NHDM-NUARData'

Placeholder type to force ShapeChange to output attributes as arrays.

Created on 25/11/2021. Last modified 25/11/2021

## ABSTRACT

### 1.4.15 Container

*Class «FeatureType» in package 'NHDM-NUARData'*

#### Container:

<<FeatureType>>

Object that serves primarily as a container for other assets in a network. E.g. a duct, conduit or vault.

Created on 19/08/2021. Last modified 27/07/2022

#### ATTRIBUTES

 containerSubType : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

#### containerSubType:

##### Optional

A free-text equivalent of the **containerType** attribute value which may be used to reflect a source data value which is not precisely represented in the <ContainerTypeValue> codelist

[ Is static True. Containment is Not Specified. ]

 containerType : ContainerTypeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

#### containerType:

##### Mandatory (by convention)

The type of the container object.

The values for this attribute are defined in the <ContainerTypeValue> codelist.

[ Is static True. Containment is Not Specified. ]

### 1.4.16 Denotation

*Class «FeatureType» in package 'NHDM-NUARData'*

Created on 03/10/2021. Last modified 03/10/2021

### 1.4.17 Depth

*Class «FeatureType» in package 'NHDM-NUARData'*

#### Depth:

<<FeatureType>>

An indication of the depth and the method of measuring it for a point or segment of a linear feature.

Created on 21/08/2021. Last modified 28/07/2022


#### ATTRIBUTES

 depth : DepthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

#### depth:

##### Optional

Numerical value in **measurementUnits** of the depth from grade at time of survey to the top of the associated linear feature as

ATTRIBUTES	
measured for this point or segment.	[ Is static True. Containment is Not Specified. ]
 <b>depthMethod</b> : DepthMethodValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>depthMethod:</b> <b>Optional</b> The method by which the value for depth was determined for this point or segment. Values for this attribute are defined in the <DepthMethodValue> codelist	
	[ Is static True. Containment is Not Specified. ]

## 1.4.18 DepthType



Class «DataType» in package 'NHDM-NUARData'

### DepthType:

<<DataType>>

A complex type for representing Depth

Created on 21/01/2022. Last modified 28/07/2022

ATTRIBUTES	
 <b>depth</b> : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>depth:</b> <b>Optional</b> The depth value	[ Is static True. Containment is Not Specified. ]
 <b>unitOfMeasure</b> : MeasurementUnitsValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>unitOfMeasure:</b> <b>Optional</b> The unit of measure for the <b>depth</b> value. Values for this attribute are defined in the <MeasurementUnitsValue> codelist.	[ Is static True. Containment is Not Specified. ]

## 1.4.19 DomainNetworkTable


Class «FeatureType» in package 'NHDM-NUARData'




### DomainNetworkTable

<<FeatureType>>

Table holding mappings between data domains and the associated \*\*\*Network table.

Created on 23/04/2024. Last modified 23/04/2024

ATTRIBUTES	
 <b>displayName</b> : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 <b>domainName</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>networkTableName</b> : CharacterString Public	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedSubmissionDomain  Source: Public (Class) Relationship_ActorToSubmissionDomain «FeatureType»      Target: Public (Class) DomainNetworkTable «FeatureType»	

## 1.4.20 HeightType



Class «DataType» in package 'NHDM-NUARData'

### HeightType:

<<DataType>>

A complex type for representing Height

Created on 16/11/2021. Last modified 28/07/2022

ATTRIBUTES	
 <b>height</b> : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>height:</b> <b>Optional</b> The height value	[ Is static True. Containment is Not Specified. ]
 <b>unitOfMeasure</b> : MeasurementUnitsValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>unitOfMeasure:</b> <b>Optional</b> The unit of measure for the <b>height</b> value. Values for this attribute are defined in the <MeasurementUnitsValue> codelist.	[ Is static True. Containment is Not Specified. ]

## 1.4.21 HorizontalMeasurementMethod


Class «FeatureType» in package 'NHDM-NUARData'

### HorizontalMeasurementMethod:

<<FeatureType>>

An indication of the method of measuring the horizontal position of a point or segment of a linear feature.

Created on 21/08/2021. Last modified 28/07/2022

ATTRIBUTES
 <b>horizontalMeasurementMethod</b> : HorizontalMeasurementMethodValue Public

**ATTRIBUTES**

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**horizontalMeasurementMethod:****Optional**

The method by which the horizontal position of the point or segment was captured.

Values for this attribute are defined in the <**HorizontalMeasurementMethodValue**> codelist.

[ Is static True. Containment is Not Specified. ]

## 1.4.22 LengthType

Class «DataType» in package 'NHDM-NUARData'

**LengthType:**

<<DataType>>

A complex type for representing Length

Created on 16/11/2021. Last modified 28/07/2022

**ATTRIBUTES**

length : Real Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**length:****Optional**

The length value

[ Is static True. Containment is Not Specified. ]



unitOfMeasure : MeasurementUnitsValue Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**unitOfMeasure:****Optional**

The unit of measure for the **length** value.

Values for this attribute are defined in the <**MeasurementUnitsValue**> codelist.

[ Is static True. Containment is Not Specified. ]

**ABSTRACT**

## 1.4.23 MUDDIAsset

Class «FeatureType» in package 'NHDM-NUARData'

**MUDDIAsset:**

<<FeatureType>>

Representation of a physical object

Created on 21/08/2021. Last modified 28/10/2021

**ATTRIBUTES**

azimuth : Real Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


**azimuth:****Optional**

Horizontal angle (measured clockwise) of the length dimension of a feature with respect to a north base line.

[ Is static True. Containment is Not Specified. ]



## ATTRIBUTES

 azimuthMeasurementUnits : MeasurementUnitsValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**azimuthMeasurementUnits:****Optional**

The unit of measure for the value in the **azimuth** attribute.

Values for this attribute are defined in the <MeasurementUnitsValue> codelist (typically **Degrees** or **Radians**)

[ Is static True. Containment is Not Specified. ]

 centroidXYZ : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**centroidXYZ:****Optional**

X-Y-Z coordinates representing the centre of the feature for data exchange purposes. For non-linear structures, XYZ represents an anchor point used for 3D representations, which may or not coincide with the feature's centroid. In many cases, XYZ coincides with the observed location in the field (e.g., centre of manhole lid). For proper orientation in a 3D space, the **azimuth** attribute is also necessary.

Properties:

length = 255

[ Is static True. Containment is Not Specified. ]

 colour : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**colour:****Optional**

A description of the colour of the object as supplied by the Data Provider

[ Is static True. Containment is Not Specified. ]

 depth : DepthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**depth:****Optional**

Numerical value in **measurementUnits** of the depth from grade at time of survey to the top of the asset. This attribute should be used for a single approximation of asset depth according to **depthMethod**.

Absolute vertical positioning information should be represented in the geometry attribute.

Represented by the <DepthType> Data Type.

[ Is static True. Containment is Not Specified. ]

 depthMethod : DepthMethodValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**depthMethod:****Optional**

The method by which the value for depth was determined.

Values for this attribute are defined in the <DepthMethodValue> codelist

[ Is static True. Containment is Not Specified. ]

 horizontalAccuracy : LengthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**horizontalAccuracy:****Optional**

If the last survey of the feature was carried out according to PAS128, this field should represent the horizontal 'Location accuracy' associated with the Quality Level assigned to this feature, expressed as a **LengthType**.

If the last survey was not carried out according to PAS128, this field should represent the worst-case 'margin of error' reported by the surveying equipment used at the time, expressed as a **LengthType**. This field should only be populated if objective data about horizontal accuracy is available.

[ Is static True. Containment is Not Specified. ]

## ATTRIBUTES

 **horizontalMeasurementMethod** : HorizontalMeasurementMethodValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**horizontalMeasurementMethod:****Optional**

The method by which the horizontal position of the feature was captured.

Values for this attribute are defined in the <**HorizontalMeasurementMethodValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **installationMethod** : InstallationMethodTypeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**installationMethod:****Optional**

The method used to install the asset, knowledge of which can be useful for reducing risk in some scenarios.

Values for this attribute are defined in the <**InstallationMethodTypeValue**> codelist.


[ Is static True. Containment is Not Specified. ]

 **installationMethodSubType** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**installationMethodSubType:****Optional**

Text string allowing data providers to add more detail than can be captured in **installationMethod**.

[ Is static True. Containment is Not Specified. ]

 **intendedPermanence** : IntendedPermanenceValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**intendedPermanence:****Optional**

Intended longevity of the object represented by the feature.

Values for this attribute are defined in the <**IntendedPermanenceValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **locationType** : LocationTypeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**locationType:****Optional**

An indication of the location of the object (e.g. carriageway, verge etc).

Values for this attribute are defined in the <**LocationTypeValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **material** : MaterialValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**material:****Optional**

Predominant or conveying material of which the object is constructed. For features that transmit a signal or electrical power, material refers to the conductor material.



Values for this attribute are defined in the <**MaterialTypeValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **materialSubType** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**materialSubType:****Optional**

A free-text equivalent of the **material** attribute value which may be used to reflect a source data value which is not precisely represented in the <**MaterialTypeValue**> codelist

ATTRIBUTES	
[ Is static True. Containment is Not Specified. ]	
 <b>qualityLevel</b> : QualityLevelValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>qualityLevel:</b> <b>Optional</b> Quality level in accordance with PAS128:2022. This field should only be populated if the <b>MUDDIObject:dateDataCollected</b> attribute is populated with the date of a PAS128-compliant utility survey, and <b>qualityLevel</b> should reflect the Quality Level assigned during that survey. Values for this attribute are defined in the <QualityLevelValue> codelist.	[ Is static True. Containment is Not Specified. ]
 <b>undergroundStatus</b> : UndergroundStatusValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>undergroundStatus:</b> <b>Optional</b> Indicator of whether the feature is partially or completely underground. The values for this attribute are defined in the <UndergroundStatusValue> codelist.	[ Is static True. Containment is Not Specified. ]
 <b>verticalAccuracy</b> : LengthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>verticalAccuracy:</b> <b>Optional</b> If the last survey of the feature was carried out according to PAS128, this field should represent the vertical 'Location accuracy' associated with the Quality Level assigned to this feature, expressed as a <b>LengthType</b> . If the last survey was not carried out according to PAS128, this field should represent the worst-case 'margin of error' reported by the surveying equipment used at the time, expressed as a <b>LengthType</b> . This field should only be populated if objective data about vertical accuracy is available.	[ Is static True. Containment is Not Specified. ]

## 1.4.24 MUDDIEnvironmentalUnit

Class «FeatureType» in package 'NHDM-NUARData'

Created on 27/09/2021. Last modified 28/10/2021

### ABSTRACT

## 1.4.25 MUDDIEvent

Class «FeatureType» in package 'NHDM-NUARData'

Created on 27/09/2021. Last modified 28/10/2021

### ABSTRACT

## 1.4.26 MUDDIObject

Class «FeatureType» in package 'NHDM-NUARData'

**MUDDIObject:**  
<<FeatureType>>






Parent Feature Type for all entities in the MUDDI model.

Its attributes are inherited by all more specialised classes in the MUDDI model and derived profiles.

Mandatory attributes (by convention):

- dataProviderAssignedUniqueID
- dataProviderAssignedUniqueIDAutoAssigned
- geometry
- horizontalCRS
- sourceFeatureClass

Created on 17/08/2021. Last modified 26/07/2022

ATTRIBUTES
<p> <b>additionalInformation</b> : <b>CharacterString</b> <b>Public</b>  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>additionalInformation:</b>  <b>Optional</b>  Any additional information associated with the object.</p> <p style="text-align: right;">[ Is static True. Containment is Not Specified. ]</p>
<p> <b>certification</b> : <b>CharacterString</b> <b>Public</b>  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>certification:</b>  <b>Optional</b>  Name and credentials of the party (if any) that certified the data as meeting positional accuracy and attribute data requirements as agreed for data exchange purposes.</p> <p>Properties:  length = 255</p> <p style="text-align: right;">[ Is static True. Containment is Not Specified. ]</p>
<p> <b>dataOwner</b> : <b>CharacterString</b> <b>Public</b>  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dataOwner:</b>  <b>Optional</b>  Name of the data owner.  Should match a <b>name</b> value of a record with <b>actorType = Data Owner</b> in &lt;NUARActor&gt;.  This should only be specified if the Data Owner is different from the Asset (Object) Owner.</p> <p style="text-align: right;">[ Is static True. Containment is Not Specified. ]</p>
<p> <b>dataOwnerAssignedUniqueID</b> : <b>CharacterString</b> <b>Public</b>  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dataOwnerAssignedUniqueID:</b>  <b>Optional</b>  An identifier assigned by the owner of a data record relating to an asset or object, as represented by a feature in the NUAR database.  If this is certified by the data owner as unique and persistent for a single asset or object within a source dataset, this can be used to form part of the composite Data Provider Assigned Unique ID and provide persistence for the lifetime of the asset or object representation within NUAR. If this is not possible, this ID will be used simply as an attribute to be presented to end users.  This should only be assigned if the ownership of data is different from the ownership of the physical asset or object (e.g. in the case of a Local Authority effectively being the data “custodian” for NRSWA Section 50, without ownership of the installed assets, and may have their own ID strategy distinct from the asset owner).</p> <p style="text-align: right;">[ Is static True. Containment is Not Specified. ]</p>
<p> <b>dataProvenance</b> : <b>DataProvenanceValue</b> <b>Public</b> = Asset Owner Records</p> <p><b>dataProvenance:</b>  <b>Mandatory</b>  Default = "Asset Owner Records"</p>

**ATTRIBUTES**

An indication of where the data for this item originated.  
Values for this attribute are defined in the <**DataProvenanceValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **dataProviderAssignedUniqueID** : **CharacterString** **Public**  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**dataProviderAssignedUniqueID:**  
**Mandatory (by convention)**

A mandatory identifier for a feature which is persistent over the managed lifecycle of that feature.

The Data Provider Assigned Unique ID may be assigned by the provider of that feature to the NUAR platform. It is the Data Providers's responsibility to manage the feature lifecycle.

If the data provider is able to supply comprehensive, unique and persistent IDs within the scope of a source dataset, in the NUAR database Data Provider Assigned Unique ID will consist of a composite ID with the following elements:

- NUARActor:systemID - the ID of the organisation responsible for feature lifecycle management (typically the asset owner, but may be a third party service provider or a data custodian)
- The unique, persistent ID value as supplied
- MUDDIObjct:sourceFeatureClass - the name of the source dataset

Each element of the composite ID will be separated by a ":" character.

This composite ID will be globally unique within the NUAR database and will persist for the lifetime of the feature within the database. This composite ID may persist for the lifetime of the associated asset/object depending on the ID policy of the data provider.

[ Is static True. Containment is Not Specified. ]


 **dataProviderAssignedUniqueIDAutoAssigned** : **Boolean** **Public** = true

**dataProviderAssignedUniqueIDAutoAssigned:**  
**Mandatory (by convention)**

**Default = TRUE**

Boolean flag that will be set to "True" if the **dataProviderAssignedUniqueID** is automatically assigned by the platform on ingestion. If the Data Provider supplies a unique ID, this flag will be set to "False".

[ Is static True. Containment is Not Specified. ]

 **dataSensitivityLevel** : **CharacterString** **Public**  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

Properties:

length = 255


[ Is static True. Containment is Not Specified. ]

 **dateDataCollected** : **Date** **Public**  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**dateDataCollected:**  
**Optional**

Date when a network asset was last surveyed in the field. If this survey was carried out according to the PAS128 standard, the Quality Level assigned to the feature should be recorded in the **MUDDIAsset:qualityLevel** field. If the survey on this date was not carried out according to PAS128, the **MUDDIAsset:qualityLevel** field must be left unpopulated.

[ Is static True. Containment is Not Specified. ]

 **dateOfExtract** : **DateTime** **Public**  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**dateOfExtract**  
**Optional**

The value for **dateOfExtract** should be derived, where available, from **NUARSubmissionSourceDataset::dateofextract**, i.e. features belonging to a given dataset should have the same date of extract as that dataset as included in the relevant submission.

In the absence of this information it should default to the same value as **datelastupdated** (representing the date of submission to NUAR).

[ Is static True. Containment is Not Specified. ]

## ATTRIBUTES

 **dateOfLastStatusChange** : Date Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**dateOfLastStatusChange:****Optional**

The data upon which the operational status of the feature was last changed. E.g. if a “Date Abandoned” attribute is provided for an abandoned asset, this value should be assigned.

[ Is static True. Containment is Not Specified. ]

 **description** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**description:****Optional**

Descriptive text for the feature.

[ Is static True. Containment is Not Specified. ]

 **enhancedMeasures** : EnhancedMeasuresTypeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**enhancedMeasures:****Optional**


Indicates any additional or enhanced measures a third party should undertake before commencing works in order that they should be carried out safely.

This may be a requirement to follow specialised guidance for the type of asset, or require further information to be provided to the asset owner, or suitable permissions obtained.

A proximity to the feature at which the enhanced measure is activated may be specified in the **enhancedMeasuresProximity** attribute.

Values for this attribute are defined in the <**EnhancedMeasuresTypeValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **enhancedMeasuresProximity** : LengthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**enhancedMeasuresProximity:****Optional**

The proximity to the feature, in **measurementUnits**, at which any enhanced measure specified in the **enhancedMeasures** attribute is activated.

Any such proximity will result in a “Zone Of Interest” feature being generated for the associated asset.

[ Is static True. Containment is Not Specified. ]

 **expectedRefreshPeriod** : TimePeriodType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**expectedRefreshPeriod:****Optional**

The time period within which a refresh of the feature data would be expected.

Represented by the <**TimePeriodType**> Data Type.

[ Is static True. Containment is Not Specified. ]

 **featureType** : FeatureTypeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )







**featureType:****Optional**







Category of feature based on feature function and configuration.

Values for this attribute are defined in the <**FeatureTypeValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **geometry** : GM\_Object Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

ATTRIBUTES
<p><b>geometry:</b>  <b>Mandatory (by convention)</b>  The geometry of the feature</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>horizontalCRS</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>horizontalCRS:</b>  <b>Mandatory (by convention)</b>  Coordinate system, datum, and epoch date (if applicable) associated with the X and Y coordinates (e.g. “EPSG:27700” for British National Grid)</p> <p>Properties:  length = 10</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>localeReference</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>localeReference:</b>  <b>Optional</b>  An identifier for the general locale of the object. E.g. a street reference such as a USRN, or a land parcel id.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>localeReferenceType</b> : LocaleReferenceTypeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>localeReferenceType:</b>  <b>Optional</b>  The type of the reference specified in the <b>localeReference</b> attribute.  Values for this attribute are defined in the &lt;LocaleReferenceTypeValue&gt; codelist.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>objectName</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>objectName:</b>  <b>Optional</b>  Any name assigned to the object by the asset owner</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>objectOwner</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>objectOwner:</b>  <b>Optional</b>  Name of the owner of the physical object.  Should match a <b>name</b> value of a record with <b>actorType = Object Owner</b> in &lt;NUARActor&gt;.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>objectOwnerAssignedUniqueID</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>objectOwnerAssignedUniqueID:</b>  <b>Optional</b>  An identifier assigned by the owner of an asset or object, as represented by a feature in the NUAR database.  If this is certified by the object owner as unique and persistent for a single asset or object within a source dataset, this can be used to form part of the composite Data Provider Assigned Unique ID and provide persistence for the lifetime of the asset or object representation within NUAR. If this is not possible, this ID will be used simply as an attribute to be presented to end users.</p>

ATTRIBUTES
[ Is static True. Containment is Not Specified. ]
<p> <b>operationalStatus</b> : OperationalStatusValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>operationalStatus:</b>  <b>Optional</b>  Operational status of the object or asset represented by the feature.  Values for this attribute are defined in the &lt;OperationalStatusValue&gt; codelist.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>operator</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>operator:</b>  <b>Optional</b>  Name of the object or asset operator.  Should match a <b>name</b> value of a record with <b>actorType = Object Operator</b> in &lt;NUARActor&gt;.  This should only be specified if the Operator is different from the Asset (Object) Owner.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>operatorAssignedUniqueID</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>operatorAssignedUniqueID:</b>  <b>Optional</b>  An identifier assigned by the operator of an asset or object to a feature in the NUAR database.  If this is certified by the operator as unique and persistent for a single asset or object within a source dataset, this can be used to form part of the composite Data Provider Assigned Unique ID and provide persistence for the lifetime of the asset or object representation within NUAR. If this is not possible, this ID will be used simply as an attribute to be presented to end users.  This should only be assigned if the operation of a physical asset or object is different from the ownership of that asset or object.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>originalDateDataCollected</b> : Date Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>originalDateDataCollected:</b>  <b>Optional</b>  The date upon which this feature was originally captured in the source asset owner system</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>sourceFeatureClass</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>sourceFeatureClass:</b>  <b>Mandatory (by convention)</b>  The name of the source Feature Class or dataset containing this feature as supplied by the Data Provider</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>version</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>version:</b>  <b>Optional</b>  The version specifier for the present data record as defined by the Data Provider</p> <p>Properties:  length = 255</p> <p>[ Is static True. Containment is Not Specified. ]</p>



**ATTRIBUTES**

 verticalCRS : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**verticalCRS:****Optional**

Coordinate system, datum, and epoch date (if applicable) for the Z coordinate. This is the absolute Z coordinate, not the depth from grade.


E.g. "EPSG:5101" for Ordnance Datum Newlyn.

Properties:

length = 10

[ Is static True. Containment is Not Specified. ]


**ASSOCIATIONS**

 Association (direction: Source -> Destination) dataProvidedBy

Source: Public (Class) MUDDIObjct «FeatureType»

Target: Public dataProviderID (Class) NUARActor «FeatureType»


Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring

Source: Public (Class) MUDDIObjct «FeatureType»


Target: Public submissionEventID (Class) NUARSubmissionEvent «FeatureType»

Cardinality: [1]

 Association (direction: Source -> Destination) linkedObject


Source: Public (Class) Relationship\_ObjectToContactDetails «FeatureType»

Target: Public (Class) MUDDIObjct «FeatureType»

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_WronglyRecordedObject «FeatureType»

Target: Public (Class) MUDDIObjct «FeatureType»

 Association (direction: Source -> Destination) linkedObject


Source: Public (Class) Relationship\_ObjectToSurvey «FeatureType»

Target: Public (Class) MUDDIObjct «FeatureType»

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_ObjectToRule «FeatureType»

Target: Public (Class) MUDDIObjct «FeatureType»

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_Guidance «FeatureType»

Target: Public (Class) MUDDIObjct «FeatureType»

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_SupplementalDataCoverageToObject «FeatureType»

Target: Public (Class) MUDDIObjct «FeatureType»

## ABSTRACT

**1.4.27 MUDDISpace***Class «FeatureType» in package 'NHDM-NUARData'*

Created on 26/09/2021. Last modified 28/10/2021

## ABSTRACT

**1.4.28 Network***Class «FeatureType» in package 'NHDM-NUARData'***Network:****<<FeatureType>>**



Representation of an infrastructure network.

This may be a conceptual (non-spatial) representation of a full network or a network “tier” containing entities linked by common attribution and not primarily spatially (a “Subordinate Network”).

A Network feature may also represent a geographical subnetwork of the main network.

The “parent” network for a given asset owner is related to Service Areas, Subnetworks and Subordinate Networks via relationship tables.

Created on 27/07/2024. Last modified 27/07/2024

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedServiceArea Source: Public (Class) Network «FeatureType»      Target: Public (Class) ServiceArea «FeatureType»	
 Association (direction: Source -> Destination) SubNetwork Source: Public (Class) Network «FeatureType»      Target: Public (Class) Network «FeatureType»	
 Association (direction: Source -> Destination) SubordinateNetwork Source: Public (Class) Network «FeatureType»      Target: Public (Class) Network «FeatureType»	
 Association (direction: Source -> Destination) ruleAppliesIn Source: Public (Class) Relationship_SubordinateNetworkToRule «FeatureType»      Target: Public (Class) Network «FeatureType»	
 Association (direction: Source -> Destination) linkedNetwork Source: Public (Class) Relationship_NetworkToSubNetwork «FeatureType»      Target: Public (Class) Network «FeatureType»	
 Association (direction: Source -> Destination) linkedNetwork Source: Public (Class) Relationship_NetworkToNetworkConveyance «FeatureType»      Target: Public (Class) Network «FeatureType»	

ASSOCIATIONS	
 Association (direction: Source -> Destination) isPartOf	
Source: Public (Class) Site «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) isPartOf	
Source: Public (Class) NetworkConveyance «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) SubNetwork	
Source: Public (Class) Network «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToServiceArea «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedSubordinateNetwork	
Source: Public (Class) Relationship_NetworkToSubordinateNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToSite «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) SubordinateNetwork	
Source: Public (Class) Network «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedNetwork	
Source: Public (Class) Relationship_NetworkToSubordinateNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) linkedSubNetwork	
Source: Public (Class) Relationship_NetworkToSubNetwork «FeatureType»	Target: Public (Class) Network «FeatureType»

## ABSTRACT

**1.4.29 NetworkAccessory**

*Class «FeatureType» in package 'NHDM-NUARData'*

**NetworkAccessory:**

<<FeatureType>>

Asset that has a role in the support, containment, access or physical protection of a conveyance object in a utility network

Created on 19/08/2021. Last modified 27/07/2022

ATTRIBUTES
 accessoryType : NetworkAccessoryTypeValue Public

**ATTRIBUTES**

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


**accessoryType****Mandatory (by convention)**

The type of the Network Accessory.

The values for this attribute are defined in the <NetworkAccessoryTypeValue> codelist.


[ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) Accessorises

Source: Public (Class) NetworkAccessory «FeatureType»

Target: Public (Class) NetworkConveyance  
«FeatureType»

 Association (direction: Source -> Destination) linkedNetworkAccessory

Source: Public (Class)  
Relationship\_NetworkConveyanceToNetworkAccessory  
«FeatureType»

Target: Public (Class) NetworkAccessory  
«FeatureType»

**ABSTRACT****1.4.30 NetworkAnnotation**


Class «FeatureType» in package 'NHDM-NUARData'

**NetworkAnnotation:****<<FeatureType>>**

A textual description of an element of a network

Created on 20/08/2021. Last modified 27/07/2022

**ATTRIBUTES**

 bold : Boolean Public = false  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**bold:****Optional****Default=FALSE**

Is the text bold?


[ Is static True. Containment is Not Specified. ]

 characterSpacing : Real Public = 0  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**characterSpacing:****Optional****Default=0**

The additional space that is added to each character beyond what is defined by its character box in its font. Character spacing is a percentage of the original character's length.

[ Is static True. Containment is Not Specified. ]

 characterWidth : Real Public = 0  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**characterWidth:****Optional****Default=0**

**ATTRIBUTES**

The width that is added to each character beyond what is defined by its character box in its font. Character width is a percentage of the original character.

[ Is static True. Containment is Not Specified. ]

◆ flipAngle : Real Public = 0  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**flipAngle:**  
**Optional**  
**Default=0**

The angle (in **orientationMeasurementUnits** from the vertical) at which point rotated text is flipped (mirrored) in place.

[ Is static True. Containment is Not Specified. ]

◆ fontLeading : Real Public = 0  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**fontLeading:**  
**Optional**  
**Default=0**

The adjustment to regular spacing between lines. 0 units means no adjustment to regular line spacing. Generally equal to or greater than the text size.

[ Is static True. Containment is Not Specified. ]

◆ fontName : CharacterString Public = Arial  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**fontName:**  
**Optional**  
**Default='Arial'**

The name of the font, e.g. "Arial"

[ Is static True. Containment is Not Specified. ]

◆ fontSize : Real Public = 8  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**fontSize:**  
**Optional**  
**Default=8**

The size of the font in points (approximately 1/72 inch)

[ Is static True. Containment is Not Specified. ]

◆ fontStyle : CharacterString Public = Regular  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**fontStyle:**  
**Optional**  
**Default='Regular'**

The name of the font style, e.g. "Regular"

[ Is static True. Containment is Not Specified. ]

◆ geometryVisible : Boolean Public = false  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**geometryVisible:**  
**Optional**  
**Default=FALSE**

Should the geometry associated with the annotation object be visualised?

[ Is static True. Containment is Not Specified. ]

◆ horizontalAlignment : AnnotationHorizontalAlignmentValue Public = Left  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


## ATTRIBUTES

**horizontalAlignment:****Optional****Default='Left'**

The horizontal alignment that will be applied to text that contains multiple lines.

The values for this attribute are defined in the &lt;AnnotationHorizontalAlignmentValue&gt; codelist.

[ Is static True. Containment is Not Specified. ]

 **italic** : Boolean Public = false

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**italic:****Optional****Default=FALSE**

Is the text italic?

[ Is static True. Containment is Not Specified. ]


 **underline** : Boolean Public = false

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**underline:****Optional****Default=FALSE**

Is the text underlined?

[ Is static True. Containment is Not Specified. ]

 **verticalAlignment** : AnnotationVerticalAlignmentValue Public = Bottom


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**verticalAlignment:****Optional****Default='Bottom'**

Defines how text is vertically aligned.

The values for this attribute are defined in the &lt;AnnotationVerticalAlignmentValue&gt; codelist.

[ Is static True. Containment is Not Specified. ]

 **wordSpacing** : Real Public = 0

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**wordSpacing:****Optional****Default=0**

The additional space that is added between words of the text string. Word spacing is a percentage of the original.

[ Is static True. Containment is Not Specified. ]

 **xOffset** : Real Public = 0

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**xOffset:****Optional****Default=0**

Shifts the text position right or left

[ Is static True. Containment is Not Specified. ]

 **yOffset** : Real Public = 0

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


**yOffset:****Optional****Default=0**

Shifts the text position up or down

[ Is static True. Containment is Not Specified. ]

## ATTRIBUTES

## ASSOCIATIONS

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_LinkedFile «FeatureType»

Target: Public (Class) NetworkAnnotation  
«FeatureType»

## ABSTRACT

**1.4.31 NetworkAsset**

*Class «FeatureType» in package 'NHDM-NUARData'*


**NetworkAsset**

**<<FeatureType>>**

Asset that has a role in a utility network.

Created on 21/08/2021. Last modified 27/07/2022

## ATTRIBUTES

 container : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**container:****Optional**

The **dataProviderAssignedUniqueID** of any container object that directly encloses this Network Asset

[ Is static True. Containment is Not Specified. ]

 dateOfInstallation : Date Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**dateOfInstallation:****Optional**

The date upon which the asset was installed, as specified by the Data Provider

[ Is static True. Containment is Not Specified. ]

 insideHeight : HeightType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**insideHeight:****Optional**

For circular shaped segments, not applicable.

For non-circular shaped segments, the maximum inside height of the cross-sectional shape.

For features other than segments, the maximum inside height of the feature.

Units are always defined by **measurementUnit**.

[ Is static True. Containment is Not Specified. ]

 insideLength : LengthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**insideLength:****Optional**

For segments, not applicable.

For features other than segments, the maximum inside length of the feature (measured in the horizontal plane, perpendicular to the width).

Units are always defined by **measurementUnit**.

[ Is static True. Containment is Not Specified. ]

## ATTRIBUTES

 **insideWidth** : WidthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### **insideWidth:** **Optional**

For circular shaped segments, if the Data Provider supplies a single diameter value, this value should be stored in **insideWidth**. If an inside and outside diameter are supplied, this attribute should represent the inside diameter.  
For non-circular shaped segments, the maximum inside width of the cross-sectional shape.  
For features other than segments, the maximum inside width of the feature.  
Units are always defined by **measurementUnit**.

[ Is static True. Containment is Not Specified. ]

 **isAuxiliary** : Boolean Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### **isAuxiliary:** **Optional**

An indication that this asset is part of an auxiliary network providing supporting services for the main network

[ Is static True. Containment is Not Specified. ]

 **isCathodicProtected** : Boolean Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### **isCathodicProtected:** **Optional**

Indicator of the presence of cathodic protection on the asset

[ Is static True. Containment is Not Specified. ]

 **isEncased** : Boolean Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### **isEncased:** **Optional**

Indicator of the presence of encasement to insulate or protect the asset.  
Where the conveyance asset is contained within a “carrier” asset (e.g. as a result of replacement of metal with plastic pipes), and there is a requirement to represent the diameter of the carrier asset (see **outsideDiameter** below) this may be set to “True”.

[ Is static True. Containment is Not Specified. ]

 **isNPS** : Boolean Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


### **isNPS:** **Optional**

Indicator that the provided outside Width is a "Nominal Pipe Size" rather than a true measure. This may correspond to known inside and outside dimensions for well-known types of pipes or other network elements.

If isNPS is true and both outside and inside width are set to the same value, then it is not known to what dimension the value applies.

Properties:  
length = 40

[ Is static True. Containment is Not Specified. ]






 **outsideHeight** : HeightType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### **outsideHeight:** **Optional**

For circular shaped segments, not applicable.  
For non-circular shaped segments, the maximum outside height of the cross-sectional shape.  
For features other than segments, the maximum outside height of the feature.  
Units are always defined by **measurementUnit**.

[ Is static True. Containment is Not Specified. ]



ATTRIBUTES
<p> <b>outsideLength</b> : LengthType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>outsideLength:</b>  <b>Optional</b>  For segments, not applicable.  For features other than segments, the maximum outside length of the feature (measured in the horizontal plane, perpendicular to the width).  Units are always defined by <b>measurementUnit</b>.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>outsideWidth</b> : WidthType Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>outsideWidth:</b>  <b>Optional</b>  For circular shaped segments, if the Data Provider supplies an explicit outside diameter value, this value should be stored in <b>outsideWidth</b>. If a single diameter value is supplied, <b>insidewidth</b> should be used (see above).  Where the conveyance asset is contained within a “carrier” asset (e.g. as a result of replacement of metal with plastic pipes), and there is a requirement to represent the diameter of the carrier asset, <b>outsideDiameter</b> should represent the supplied diameter of the carrier asset and <b>isEncased</b> be set to “True”.  For non-circular shaped segments, the maximum outside width of the cross-sectional shape.  For features other than segments, the maximum outside width of the feature.  Units are always defined by <b>measurementUnit</b>.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>protectiveMaterial</b> : MaterialValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>protectiveMaterial:</b>  <b>Optional</b>  Material from which protective layers or elements of the object are constructed.  Values for this attribute are defined in the &lt;<b>MaterialValue</b>&gt; codelist.</p> <p>Properties:  length = 255</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>protectiveMaterialSubType</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>protectiveMaterialSubType:</b>  <b>Optional</b>  A free-text equivalent of the <b>protectiveMaterial</b> attribute value which may be useful to reflect a source data value which is not precisely represented in the &lt;<b>MaterialValue</b>&gt; codelist.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>utilitySubType</b> : UtilitySubTypeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>utilitySubType:</b>  <b>Mandatory (by convention)</b>  Type of utility service at a finer level of classification than <b>utilityType</b>.  Values for this attribute are defined in the &lt;<b>UtilitySubTypeValue</b>&gt; codelist.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>utilityType</b> : UtilityTypeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>utilityType:</b>  <b>Optional</b></p>

**ATTRIBUTES**

Type of utility service that a utility feature carries.

The values for this attribute are defined in the <UtilityTypeValue> codelist.

[ Is static True. Containment is Not Specified. ]

 wallThickness : WidthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**wallThickness:**


**Optional**

Maximum wall thickness.

Units are always defined by **measurementUnit**.

[ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) variableObjectValue

Source: Public (Class) VariableObjectValue «FeatureType»

Cardinality: [0..\*]

Target: Public (Class) NetworkAsset

«FeatureType»

Cardinality: [1]

 Association (direction: Source -> Destination)

Source: Public (Class) Relationship\_VariableObjectValueToAsset  
«FeatureType»

Target: Public (Class) NetworkAsset  
«FeatureType»

 Association (direction: Source -> Destination) contains

Source: Public (Class) Site «FeatureType»

Target: Public (Class) NetworkAsset  
«FeatureType»

 Association (direction: Source -> Destination) linkedAsset

Source: Public (Class) Relationship\_SiteToAsset «FeatureType»

Target: Public (Class) NetworkAsset  
«FeatureType»

**ABSTRACT****1.4.32 NetworkConveyance**

*Class «FeatureType» in package 'NHDM-NUARData'*

**NetworkConveyance:**

**<<FeatureType>>**

Asset that has a role in the conveyance of a commodity in a utility network.

Created on 17/08/2021. Last modified 27/07/2022

**ATTRIBUTES**

 conveyanceCategory : ConveyanceCategoryValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )




**conveyanceCategory:**

**Optional**

Primary category or purpose of service of the asset. Included in each category is the supporting infrastructure, such as alarm and ventilation, needed to provide the corresponding utility service.

Values for this attribute are defined in the <ConveyanceCategoryValue> codelist.

[ Is static True. Containment is Not Specified. ]


ATTRIBUTES
<p> conveyanceMethod : ConveyanceMethodValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>conveyanceMethod:</b> <b>Optional</b> Method to move or convey matter (the utility commodity) through the asset (e.g. Pressure, Voltage, Gravity). Values for this attribute are defined in the &lt;ConveyanceMethodValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>
<p> fillMaterial : MaterialValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>fillMaterial:</b> <b>Optional</b> Material used to fill the space between a utility feature and its encasement or an out-of-service “carrier” feature. Values for this attribute are defined in the &lt;MaterialTypeValue&gt; codelist.  Properties: length = 255 [ Is static True. Containment is Not Specified. ]</p>
<p> isFilled : Boolean Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>isFilled:</b> <b>Optional</b> Indicator of the presence of interstitial material being used to fill the space between a utility feature and its encasement or an out-of-service “carrier” feature. [ Is static True. Containment is Not Specified. ]</p>
<p> operatingConveyanceLevel : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>operatingConveyanceLevel:</b> <b>Optional</b> A specific value supplied by the Data Provider that represents the “level” at which the commodity is conveyed in this network object (e.g. if a specific voltage level is supplied for an electricity cable above and beyond the <b>conveyanceMethod</b>). [ Is static True. Containment is Not Specified. ]</p>
<p> operatingConveyanceLevelType : OperatingConveyanceLevelTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>operatingConveyanceLevelType:</b> <b>Optional</b> The type of the conveyance level for this network object (e.g. pressure, voltage level). Values for this attribute are defined in the &lt;OperatingConveyanceLevelTypeValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>
<p> operatingConveyanceLevelUnits : MeasurementUnitsValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>operatingConveyanceLevelUnits:</b> <b>Optional</b> The units associated with the operating conveyance level value. Values for this attribute are defined in the &lt;MeasurementUnitsValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>
<p> operatingTemperature : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p>

## ATTRIBUTES

**operatingTemperature:****Optional**

A specific value supplied by the Data Provider that represents the temperature of the commodity conveyed by this network object

[ Is static True. Containment is Not Specified. ]


 operatingTemperatureRange : TemperatureRangeValue Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**operatingTemperatureRange:****Optional**

An indication of the range of temperatures of the commodity conveyed by this network object if supplied by the Data Provider. Values for this attribute are defined in the <TemperatureRangeValue> codelist.

[ Is static True. Containment is Not Specified. ]

 operatingTemperatureUnits : MeasurementUnitsValue Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**operatingTemperatureUnits:****Optional**

The units associated with the operating temperature value.

Values for this attribute are defined in the <MeasurementUnitsValue> codelist.

[ Is static True. Containment is Not Specified. ]

 outerMaterial : MaterialValue Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**outerMaterial:****Optional**


Material from which the outer covering, carrier pipe, insulation, etc. is constructed.

Values for this attribute are defined in the <MaterialTypeValue> codelist.

Properties:

length = 255

[ Is static True. Containment is Not Specified. ]

 outerMaterialSubType : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**outerMaterialSubType:****Optional**

A free-text equivalent of the **outerMaterial** attribute value which may be useful to reflect a source data value which is not precisely represented in the <MaterialValue> codelist.

[ Is static True. Containment is Not Specified. ]

## ASSOCIATIONS

 Association (direction: Source -> Destination) isPartOf

Source: Public (Class) NetworkConveyance «FeatureType»

Target: Public (Class) Network «FeatureType»

 Association (direction: Source -> Destination) Accessorises

Source: Public (Class) NetworkAccessory «FeatureType»

Target: Public (Class) NetworkConveyance «FeatureType»

 Association (direction: Source -> Destination) linkedNetworkConveyance

Source: Public (Class)


Relationship\_NetworkConveyanceToNetworkAccessory

Target: Public (Class) NetworkConveyance

«FeatureType»

## ASSOCIATIONS

«FeatureType»

 Association (direction: Source -> Destination) linkedConveyance

Source: Public (Class)

Relationship\_NetworkToNetworkConveyance «FeatureType»

Target: Public (Class) NetworkConveyance

«FeatureType»

## ABSTRACT


**1.4.33 NetworkConveyanceLink***Class «FeatureType» in package 'NHDM-NUARData'***NetworkConveyanceLink:**

&lt;&lt;FeatureType&gt;&gt;

Linear utility feature that serves as a link or edge in a network graph

Created on 17/08/2021. Last modified 27/07/2022

## ATTRIBUTES

 componentSubType : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )
**componentSubType:****Optional**

A free-text equivalent of the **componentType** attribute value which may be used to reflect a source data value which is not precisely represented in the <NetworkLinkComponentValue> codelist

[ Is static True. Containment is Not Specified. ]

 componentType : NetworkLinkComponentTypeValue Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )
**componentType:****Mandatory (by convention)**

A component is an element of a system which corresponds to the lowest level of detail or feature disaggregation for data exchange purposes.

Values for this attribute are defined in the <NetworkLinkComponentValue> codelist.

[ Is static True. Containment is Not Specified. ]

 downstreamDepth : DepthType Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )
**downstreamDepth:****Optional**

Numerical value in **measurementUnits** of the depth from grade at time of survey or other determination method to the top of the downstream end of the asset.

If this attribute is provided for a NetworkLink feature, then the **depth** attribute should be understood as upstreamDepth.

This attribute should be used for a single approximation of asset depth according to **depthMethod**.


Absolute vertical positioning information should be represented in the **geometry** attribute.





[ Is static True. Containment is Not Specified. ]

 endNodeID : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )
**endNodeID:****Optional**

Holds the **dataProviderAssignedUniqueID** of the end node of the link, allowing representation of a topological network

Properties:  
size = 38

ATTRIBUTES	
[ Is static True. Containment is Not Specified. ]	
 <b>startNodeID</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>startNodeID:</b> <b>Optional</b> Holds the <b>dataProviderAssignedUniqueID</b> of the start node of the link, allowing representation of a topological network	
Properties: size = 38	
[ Is static True. Containment is Not Specified. ]	

ASSOCIATIONS	
 Association (direction: Source -> Destination) To	
Source: Public (Class) NetworkConveyanceLink «FeatureType» Cardinality: [0..*]	Target: Public (Class) NetworkConveyanceNode «FeatureType» Cardinality: [0..1]
 Association (direction: Source -> Destination) From	
Source: Public (Class) NetworkConveyanceLink «FeatureType» Cardinality: [0..*]	Target: Public (Class) NetworkConveyanceNode «FeatureType» Cardinality: [0..1]
 Association (direction: Source -> Destination) relates To	
Source: Public (Class) NetworkLinkZoneOfInterest «FeatureType»	Target: Public (Class) NetworkConveyanceLink «FeatureType»
 Association (direction: Source -> Destination) linkedLink	
Source: Public (Class) Relationship_LinkToLinkZoneOfInterest «FeatureType»	Target: Public (Class) NetworkConveyanceLink «FeatureType»

## ABSTRACT


**1.4.34 NetworkConveyanceNode**


Class «FeatureType» in package 'NHDM-NUARData'





**NetworkConveyanceNode:****<<FeatureType>>**

Discrete utility feature that is directly involved with the conveyance, control, or distribution of a particular utility service and serves as a node in a network graph

Created on 17/08/2021. Last modified 27/07/2022

ATTRIBUTES
 <b>componentSubType</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )
<b>componentSubType:</b> <b>Optional</b> A free-text equivalent of the <b>componentType</b> attribute value which may be used to reflect a source data value which is not precisely represented in the <NetworkNodeComponentValue> codelist

ATTRIBUTES	
[ Is static True. Containment is Not Specified. ]	
 <b>componentType</b> : NetworkNodeComponentTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	
<b>componentType:</b> <b>Mandatory (by convention)</b> A component is an element of a system which corresponds to the lowest level of detail or feature disaggregation for data exchange purposes. Values for this attribute are defined in the <NetworkNodeComponentValue> codelist.	
[ Is static True. Containment is Not Specified. ]	

ASSOCIATIONS	
 Association (direction: Source -> Destination) To	
Source: Public (Class) NetworkConveyanceLink «FeatureType» Cardinality: [0..*]	Target: Public (Class) NetworkConveyanceNode «FeatureType» Cardinality: [0..1]
 Association (direction: Source -> Destination) From	
Source: Public (Class) NetworkConveyanceLink «FeatureType» Cardinality: [0..*]	Target: Public (Class) NetworkConveyanceNode «FeatureType» Cardinality: [0..1]
 Association (direction: Source -> Destination) relatesTo	
Source: Public (Class) NetworkNodeZoneOfInterest «FeatureType»	Target: Public (Class) NetworkConveyanceNode «FeatureType»
 Association (direction: Source -> Destination) linkedNode	
Source: Public (Class) Relationship_NodeToNodeZoneOfInterest «FeatureType»	Target: Public (Class) NetworkConveyanceNode «FeatureType»

## ABSTRACT

**1.4.35 NetworkDescriptionObject**


Class «FeatureType» in package 'NHDM-NUARData'

**NetworkDescriptionObject:**

<<FeatureType>>

An artefact that describes an element of a network and may be visualised as a descriptive element on a map

Created on 19/08/2021. Last modified 27/07/2022

ATTRIBUTES
 <b>associatedAssets</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )
<b>associatedAssets:</b> <b>Optional</b> <b>dataProviderAssignedUniqueID</b> values of any assets with which this description object is associated
[ Is static True. Containment is Not Specified. ]

**ATTRIBUTES**

associatedText : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**associatedText:****Optional**

Any text associated with the description object. E.g. the depth value associated with a depth marker, the text of an annotation element or the reference number associated with a cross-section drawing.

[ Is static True. Containment is Not Specified. ]

descriptionType : NetworkDescriptionTypeValue Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**descriptionType:****Optional**

The type of the description object.

The values for this attribute are defined in the <NetworkDescriptionTypeValue> codelist.

[ Is static True. Containment is Not Specified. ]

isQueryable : Boolean Public = false  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**isQueryable:****Optional****Default=FALSE**

Indication of whether the element is queryable on the map. E.g. a cross-section marker would be queryable, whereas an annotation element is unlikely to be.

[ Is static True. Containment is Not Specified. ]

orientation : Real Public = 0  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**orientation:****Optional****Default=0**

The rotation angle for the display of the symbol associated with description object

[ Is static True. Containment is Not Specified. ]

orientationMeasurementUnits : MeasurementUnitsValue Public = Degrees  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**orientationMeasurementUnits:****Optional****Default='Degrees'**

The unit of measure for the value in the **orientation** attribute.

Values for this attribute are defined in the <MeasurementUnitsValue> codelist (typically **Degrees** or **Radians**)

[ Is static True. Containment is Not Specified. ]

referenceScale : Real Public = 1000  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**referenceScale:****Optional****Default=1000**






The scale in which an annotation appears on screen at its symbol size. At smaller scales it will be smaller than the onscreen symbol size, at larger scales it will be larger

[ Is static True. Containment is Not Specified. ]

textColour : CharacterString Public = #000000

**textColour:****Mandatory****Default=#000000 (Black)**



ATTRIBUTES	
<p>A hex colour code giving the colour of the description text if displayed on a map. [ Is static True. Containment is Not Specified. ]</p>	
<p> <b>textPlacementX</b> : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>textPlacementX:</b> <b>Optional</b> The x-coordinate of the anchor point indicating the text placement. [ Is static True. Containment is Not Specified. ]</p>	
<p> <b>textPlacementY</b> : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>textPlacementY:</b> <b>Optional</b> The y-coordinate of the anchor point indicating the text placement. [ Is static True. Containment is Not Specified. ]</p>	
<p> <b>utilitySubType</b> : UtilitySubTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>utilitySubType:</b> <b>Optional</b> Type of utility service at a finer level of classification than <b>utilityType</b>. Values for this attribute are defined in the &lt;UtilitySubTypeValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>	
<p> <b>utilityType</b> : UtilityTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>utilityType:</b> <b>Mandatory (by convention)</b> Type of utility service that a utility feature carries. The values for this attribute are defined in the &lt;UtilityTypeValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>	
ASSOCIATIONS	
<p> Association (direction: Source -&gt; Destination) linkedObject</p> <p>Source: Public (Class) NetworkDescriptionObject «FeatureType»      Target: Public (Class) Relationship_LinkedFile «FeatureType»</p>	

## ABSTRACT

**1.4.36 NetworkDimension**

*Class «FeatureType» in package 'NHDM-NUARData'*

**NetworkDimension:****<<FeatureType>>**

A descriptive element that describes a measurement of a network, or its position relative to another feature.  
For information on Dimension elements, see ISO 129-1:2018.

Created on 20/08/2021. Last modified 27/07/2022

## ATTRIBUTES

ATTRIBUTES
<p> <b>dimensionLine</b> : GM_Curve Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dimensionLine:</b> <b>Optional</b> Straight or curved line with terminators at each end or origin and terminator at each end, indicating the size of a feature or the extent of a feature or between two features, or between a feature and an extension line, or between two extension lines [ Is static True. Containment is Not Specified. ]</p>
<p> <b>dimensionValue</b> : LengthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dimensionValue:</b> <b>Optional</b> Nominal numerical value expressed in a specific unit relevant to a linear or angular dimension [ Is static True. Containment is Not Specified. ]</p>
<p> <b>endDimensionLineExtension</b> : GM_Curve Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>endDimensionLineExtension:</b> <b>Optional</b> Dimension line extension at the end dimension point. Where space is limited, dimension lines may be extended past the extension lines and the arrowheads placed outside of the extension lines and reversed [ Is static True. Containment is Not Specified. ]</p>
<p> <b>endDimensionPoint</b> : GM_Point Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>endDimensionPoint:</b> <b>Optional</b> Last point of the dimension line [ Is static True. Containment is Not Specified. ]</p>
<p> <b>endExtensionLine</b> : GM_Curve Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>endExtensionLine:</b> <b>Optional</b> Extension line at the end dimension point [ Is static True. Containment is Not Specified. ]</p>
<p> <b>fontName</b> : CharacterString Public = Arial</p> <p><b>fontName:</b> <b>Mandatory</b> <b>Default='Arial'</b> The name of the font to be used for displaying the text element of the dimension. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>fontSize</b> : Real Public = 8</p> <p><b>fontSize:</b> <b>Mandatory</b> <b>Default=8</b> The font point size to be used for displaying the text element of the dimension. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>propertyIndicator</b> : CharacterString Public</p>

ATTRIBUTES	
<p>Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>propertyIndicator:</b> <b>Optional</b> Symbol or character used to define the shape of a feature or property of an entity composed of several features. Prepend to the dimensionValue.</p> <p>[ Is static True. Containment is Not Specified. ]</p>	
<p> startDimensionLineExtension : GM_Curve Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>startDimensionLineExtension:</b> <b>Optional</b> Dimension line extension at the start dimension point. Where space is limited, dimension lines may be extended past the extension lines and the arrowheads placed outside of the extension lines and reversed.</p> <p>[ Is static True. Containment is Not Specified. ]</p>	
<p> startDimensionPoint : GM_Point Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>startDimensionPoint:</b> <b>Optional</b> First point of the dimension line</p> <p>[ Is static True. Containment is Not Specified. ]</p>	
<p> startExtensionLine : GM_Curve Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>startExtensionLine:</b> <b>Optional</b> Extension line at the start dimension point</p> <p>[ Is static True. Containment is Not Specified. ]</p>	
ASSOCIATIONS	
<p> Association (direction: Source -&gt; Destination) linkedObject</p> <p>Source: Public (Class) Relationship_LinkedFile «FeatureType»      Target: Public (Class) NetworkDimension «FeatureType»</p>	

## ABSTRACT

**1.4.37 NetworkLinkZoneOfInterest**


*Class «FeatureType» in package 'NHDM-NUARData'*

**NetworkLinkZoneOfInterest:**

**<<FeatureType>>**

A zone of interest which emanates from a Network Link, indicating a proximity within which enhanced measures may apply if undertaking work


Created on 20/08/2021. Last modified 27/07/2022

ATTRIBUTES
<p> parentFeatureID : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>parentFeatureID:</b></p>

**ATTRIBUTES****Optional**


The **dataProviderAssignedUniqueID** value of the feature from which the Zone of Interest polygon is derived  
 [ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) relates To

Source: Public (Class) NetworkLinkZoneOfInterest  
 «FeatureType»

Target: Public (Class) NetworkConveyanceLink  
 «FeatureType»

 Association (direction: Source -> Destination) linkedLinkZoneOfInterest

Source: Public (Class) Relationship\_LinkToLinkZoneOfInterest  
 «FeatureType»

Target: Public (Class) NetworkLinkZoneOfInterest  
 «FeatureType»

**ABSTRACT****1.4.38 NetworkNodeZoneOfInterest**

*Class «FeatureType» in package 'NHDM-NUARData'*

**NetworkNodeZoneOfInterest:**

<<FeatureType>>

A zone of interest which emanates from a Network Node, indicating a proximity within which enhanced measures may apply if undertaking work

Created on 18/08/2021. Last modified 27/07/2022

**ATTRIBUTES**

 **parentFeatureID** : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**parentFeatureID:****Optional**

The **dataProviderAssignedUniqueID** value of the feature from which the Zone of Interest polygon is derived  
 [ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) relatesTo

Source: Public (Class) NetworkNodeZoneOfInterest  
 «FeatureType»

Target: Public (Class) NetworkConveyanceNode  
 «FeatureType»

 Association (direction: Source -> Destination) linkedNodeZoneOfInterest

Source: Public (Class) Relationship\_NodeToNodeZoneOfInterest  
 «FeatureType»

Target: Public (Class) NetworkNodeZoneOfInterest  
 «FeatureType»





**ABSTRACT****1.4.39 NHDM-NUARObject**

*Class «FeatureType» in package 'NHDM-NUARData'*

**NUARObject:****<<FeatureType>>**

Parent Feature Type for all entities in the NUAR database. Establishes the key metadata attributes required for data inserts, updates and deletions.

Created on 27/10/2021. Last modified 26/07/2024

ATTRIBUTES
<p> <b>dateLastUpdated</b> : DateTime Public</p> <p><b>dateLastUpdated:</b> <b>Mandatory</b> The date upon which this feature was last updated at source. In the absence of information on the last update date in the source data, this will be the date of the last supply of the containing data set to the NUAR system. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>dateOfLastLifecycleStatusChange</b> : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dateOfLastLifecycleStatusChange:</b> <b>Optional</b> The date upon which the current <i>lifecycleStatus</i> value was set [ Is static True. Containment is Not Specified. ]</p>
<p> <b>lifecycleStatus</b> : LifecycleStatusValue Public = Submitted</p> <p><b>lifecycleStatus:</b> <b>Mandatory</b> <b>Default = 'Submitted'</b> A description of a feature's stage in the general feature lifecycle, through submission, publication, retirement, archive and deletion. Currently used mainly at the Submission level to dictate which data submissions are ready for publication to the live view. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>nuarVersion</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>nuarVersion:</b> <b>Optional</b> An indication of the version of the service at the time that this feature was created. Not used at present. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>systemID</b> : CharacterString Public</p> <p><b>systemID:</b> <b>Mandatory</b> A mandatory, auto-generated identifier which is globally unique within the NUAR platform, and persistent for the lifespan of a data record representing a Feature Version (i.e. an instance of a feature distinguished from other instances of the same feature by distinct values of the System ID attribute and metadata values representing the date and time when the instance was created for use in the NUAR platform. A Feature Version is represented by a single Data Record.  Properties: size = 38 [ Stereotype is «identifier». Is static True. Containment is Not Specified. ]</p>
<p> <b>systemLoadDate</b> : DateTime Public</p> <p><b>systemLoadDate:</b> <b>Mandatory</b> Date at which the data record for this entity was last loaded into the datastore system. In the case of NUAR, this is the database which is the target of the Data Transformation and Ingestion process, populated after transformation to the target NUAR Data</p>

ATTRIBUTES
<div>Model is completed.</div> <div>[ Is static True. Containment is Not Specified. ]</div>

## 1.4.40 NonUtilityObject



Class «FeatureType» in package 'NHDM-NUARData'

### NonUtilityObject:

#### <<FeatureType>>

An underground object which is not part of a utility network, but which may have an impact on planning or excavation activities.

Created on 21/08/2021. Last modified 28/07/2022

ATTRIBUTES
<div>  subtype : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False ) </div> <div> <b>subType:</b>  <b>Optional</b>  A free-text equivalent of the <b>type</b> attribute value which may be useful to reflect a source data value which is not precisely represented in the &lt;NonUtilityObjectTypeValue&gt; codelist. </div> <div>[ Is static True. Containment is Not Specified. ]</div>
<div>  type : NonUtilityObjectTypeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False ) </div> <div> <b>type:</b>  <b>Optional</b>  The type of the non-utility object.  The values for this attribute are defined in the &lt;NonUtilityObjectTypeValue&gt; codelist. </div> <div>[ Is static True. Containment is Not Specified. ]</div>

## 1.4.41 NUARAddressType



Class «DataType» in package 'NHDM-NUARData'








### NUARAddressType:

#### <<DataType>>

A Data Type allowing addresses to be represented in the NUAR database

Created on 05/05/2022. Last modified 26/07/2022

ATTRIBUTES
<div>  buildingName : CharacterString Public </div> <div> <b>buildingName:</b>  <b>Optional</b>  A description applied to a single building or group of buildings (e.g. "Highfield House") </div> <div>[ Is static True. Containment is Not Specified. ]</div>
<div>  buildingNumber : CharacterString Public </div> <div> <b>buildingNumber:</b>  <b>Optional</b>  A number given to a single building or group of buildings (e.g. "44") </div>

ATTRIBUTES	
	[ Is static True. Containment is Not Specified. ]
 locality : <code>CharacterString</code> Public  <b>locality:</b> <b>Optional</b> An area or geographical identifier within a town, village or hamlet	[ Is static True. Containment is Not Specified. ]
 postcode : <code>CharacterString</code> Public  <b>postcode:</b> <b>Optional</b> The postcode of the address	[ Is static True. Containment is Not Specified. ]
 singleLineAddress : <code>CharacterString</code> Public  <b>singleLineAddress:</b> <b>Optional</b> All elements of the address combined in a single human-readable string	[ Is static True. Containment is Not Specified. ]
 streetName : <code>CharacterString</code> Public  <b>streetName:</b> <b>Optional</b> The street name of the address	[ Is static True. Containment is Not Specified. ]
 subBuilding : <code>CharacterString</code> Public  <b>subBuilding:</b> <b>Optional</b> An identifier for a subdivision of a property (e.g. "Flat 3")	[ Is static True. Containment is Not Specified. ]
 townName : <code>CharacterString</code> Public  <b>townName:</b> <b>Optional</b> The name of the town the address is within	[ Is static True. Containment is Not Specified. ]
 uprn : <code>CharacterString</code> Public  <b>uprn:</b> <b>Optional</b> The Unique Property Reference Number associated with the address	[ Is static True. Containment is Not Specified. ]

## 1.4.42 NUARDataFeatureLifecycle\_history

Class «FeatureType» in package 'NHDM-NUARData'

ATTRIBUTES	
 <b>dateOfChange</b> : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>description</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>featureSystemID</b> : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 <b>featureType</b> : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 <b>newLifecycleStatus</b> : LifecycleStatusValue Public	[ Is static True. Containment is Not Specified. ]
 <b>newVersion</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>originalLifecycleStatus</b> : LifecycleStatusValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>originalVersion</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>supersededByFeatureType</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>supersededByID</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>systemID</b> : CharacterString Public	[ Stereotype is «identifier». Is static True. Containment is Not Specified. ]

## 1.4.43 NUARGuidance

Class «FeatureType» in package 'NHDM-NUARData'

### NUARGuidance:




<<FeatureType>>

A representation of a guidance or process document, which may have a file associated with it.

Created on 27/07/2024. Last modified 27/07/2024

### ATTRIBUTES



ATTRIBUTES	
 <b>name</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>name:</b> <b>Optional</b> A name for the guidance which may be displayed to users.	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject  Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) NUARGuidance «FeatureType»
 Association (direction: Source -> Destination) linkedGuidance  Source: Public (Class) Relationship_Guidance «FeatureType»	Target: Public (Class) NUARGuidance «FeatureType»

## 1.4.44 NUARLinkedFile

Class «FeatureType» in package 'NHDM-NUARData'




### NUARLinkedFile:






<<FeatureType>>

Representation of a file linked to another entity in the NUAR database.

Features contain links to files held externally to the NUAR database (although possibly within the NUAR environment more broadly).

Created on 16/11/2021. Last modified 28/07/2022


ATTRIBUTES	
 <b>checksum</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>checksum</b> <b>Optional</b> Checksum for the file to allow data integrity to be maintained across environments.	[ Is static True. Containment is Not Specified. ]
 <b>fullPath</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>fullPath:</b> <b>Optional</b> The URI of the file, qualified sufficiently to allow it to be accessed by NUAR. For external resources, a full path will be required. For resources within the NUAR infrastructure a partial path may be sufficient, with further qualification provided in platform configuration (for example).	[ Is static True. Containment is Not Specified. ]
 <b>lastScanDate</b> : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>lastScanDate</b> <b>Optional</b>	




ATTRIBUTES	
The date and time at which the last malware scan was carried out on the file associated with the record. [ Is static True. Containment is Not Specified. ]	
 mimeType : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>mimeType:</b> <b>Optional</b> The type of the file according to the MIME standard used for various communication protocols (e.g. “application/pdf”)	[ Is static True. Containment is Not Specified. ]
 name : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>name:</b> <b>Optional</b> A name for the file which may be displayed to users.	[ Is static True. Containment is Not Specified. ]
 scanStatus : CharacterString Public = Pending  <b>scanStatus:</b> <b>Mandatory</b> <b>Default='Pending'</b> The current status of the file associated with the record with regards to malware scanning. Values for this attribute are defined in the <FileScanStatusValue> codelist.	[ Is static True. Containment is Not Specified. ]
 typeDescription : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>typeDescription:</b> <b>Optional</b> A meaningful description of the file type (e.g. “PDF”)	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedFile  Source: Public (Class) Relationship_LinkedFile «FeatureType»      Target: Public (Class) NUARLinkedFile «FeatureType»	



## 1.4.45 NUARSubordinateNetworkDefinition

Class «FeatureType» in package 'NHDM-NUARData'

Created on 06/02/2024. Last modified 06/02/2024

ATTRIBUTES
 linkedNetworkID : CharacterString Public  <b>linkedNetworkID:</b> <b>Mandatory</b> dataproducerassigneduniqueid in the specified network table of the record representing the subordinate network.

ATTRIBUTES
[ Is static True. Containment is Not Specified. ]
 <b>linkedNetworkTable</b> : <code>CharacterString</code> <code>Public</code> <b>linkedNetworkTable:</b> <b>Mandatory</b> The name of the table - qualified by a schema name - containing the subordinate network record. [ Is static True. Containment is Not Specified. ]
 <b>memberFeaturesTable</b> : <code>CharacterString</code> <code>Public</code> <b>memberFeaturesTable:</b> <b>Mandatory</b> The name of the table - qualified by a schema name - containing features which may be members of the subordinate network, depending on the membership criteria. [ Is static True. Containment is Not Specified. ]
 <b>membershipCriteria</b> : <code>CharacterString</code> <code>Public</code> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False ) <b>membershipCriteria:</b> <b>Optional</b> The criteria which dictate which records in the specified table are members of the subordinate network. The string should equate to a SQL WHERE clause (not including the WHERE command) that causes features that belong to the subordinate network to be returned by a suitable SELECT query. [ Is static True. Containment is Not Specified. ]

ASSOCIATIONS
 Association (direction: Source -> Destination) <code>dataProvidedBy</code> Source: <code>Public</code> (Class) <code>NUARSubordinateNetworkDefinition</code> «FeatureType» Target: <code>Public</code> <code>dataProviderID</code> (Class) <code>NUARActor</code> «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) <code>dataSubmittedDuring</code> Source: <code>Public</code> (Class) <code>NUARSubordinateNetworkDefinition</code> «FeatureType» Target: <code>Public</code> <code>submissionEventID</code> (Class) <code>NUARSubmissionEvent</code> «FeatureType» Cardinality: [1]

## ABSTRACT

**1.4.46 PhysicalProtection**


*Class «FeatureType» in package 'NHDM-NUARData'*


**PhysicalProtection:**

<<FeatureType>>

Object that has a role in the physical protection of an asset in a utility network.

Created on 19/08/2021. Last modified 27/07/2022

ATTRIBUTES
 <b>physicalProtectionSubType</b> : <code>CharacterString</code> <code>Public</code> Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

ATTRIBUTES
<p><b>physicalProtectionSubType:</b>  <b>Optional</b>  A free-text equivalent of the <b>physicalProtectionType</b> attribute value which may be used to reflect a source data value which is not precisely represented in the <b>&lt;PhysicalProtectionTypeValue&gt;</b> codelist  [ Is static True. Containment is Not Specified. ]</p>
<p> <b>physicalProtectionType</b> : PhysicalProtectionTypeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>physicalProtectionType:</b>  <b>Mandatory (by convention)</b>  The type of the protection object.  The values for this attribute are defined in the <b>&lt;PhysicalProtectionTypeValue&gt;</b> codelist.  [ Is static True. Containment is Not Specified. ]</p>

## ABSTRACT

**1.4.47 PlanningArea**


*Class «FeatureType» in package 'NHDM-NUARData'*

**PlanningArea**

**<<FeatureType>>**

Defined area with characteristics or constraints relevant to excavation planning

Created on 19/08/2021. Last modified 28/07/2022

ATTRIBUTES
<p> <b>directive</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>directive:</b>  <b>Optional</b>  The name of the Directive or Legislation which defines the status of the Planning Area  [ Is static True. Containment is Not Specified. ]</p>
<p> <b>planningAreaType</b> : PlanningAreaTypeValue Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>planningAreaType:</b>  <b>Optional</b>  The type of the Planning Area.  The values for this attribute are defined in the <b>&lt;PlanningAreaTypeValue&gt;</b> codelist.  [ Is static True. Containment is Not Specified. ]</p>
<p> <b>policyDocumentation</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>policyDocumentation:</b>  <b>Optional</b>  A link to a file or website, or a copy of the text, which provides details of the policy documentation or guidance relating to this Planning Area  [ Is static True. Containment is Not Specified. ]</p>
<p> <b>policyName</b> : CharacterString Public  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>policyName:</b>  <b>Optional</b></p>

**ATTRIBUTES**

The name of the policy with which this Planning Area is associated, e.g. “Wildlife and Countryside Act 1981”

Properties:

length = 255

[ Is static True. Containment is Not Specified. ]

## 1.4.48 QualityLevel

Class «FeatureType» in package 'NHDM-NUARData'

### QualityLevel:

<<FeatureType>>

An indication of the Quality Level recorded for a point or segment of a linear feature.

Created on 21/08/2021. Last modified 28/07/2022

**ATTRIBUTES**

 qualityLevel : QualityLevelValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### qualityLevel:

#### Optional

Quality level recorded for the point or segment in accordance with PAS128:2022. This field should only be populated if the **dateOfCapture** attribute is populated with the date of a PAS128-compliant utility survey, and **qualityLevel** should reflect the Quality Level assigned to the point or segment during that survey.

Values for this attribute are defined in the <QualityLevelValue> codelist.

[ Is static True. Containment is Not Specified. ]

## 1.4.49 ServiceArea

Class «FeatureType» in package 'NHDM-NUARData'

### ServiceArea:

<<FeatureType>>

Representation of the geographical coverage of a whole or partial infrastructure network

Created on 27/07/2024. Last modified 27/07/2024

**ATTRIBUTES**

 buffered : Boolean Public = false

### buffered:

#### Optional

Default=FALSE

Indication of whether this service area geometry has been generated by buffering a source geometry

[ Is static True. Containment is Not Specified. ]


 bufferSize : WidthType Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

### bufferSize:

#### Optional

If **buffered** = TRUE, a value indicating the size of the buffer applied (with units)

[ Is static True. Containment is Not Specified. ]

 nationalOrRegionalCoverage : CharacterString Public = N/A

**ATTRIBUTES****nationalOrRegionalCoverage:****Mandatory****Default = "N/A"**

If the geometry of this service area is represented by one of the standard regional or national boundary geometries, this field contains the name of this boundary (whose geometry is stored in the **StandardServiceArea** Feature Type).

The values for this attribute are defined in the <**NationalOrRegionalCoverageValue**> codelist.


[ Is static True. Containment is Not Specified. ]

 **originalServiceAreaID** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**originalServiceAreaID:****Optional**

For a Service Area whose geometry or extent has been derived from another Service Area geometry (e.g. via buffering), this attribute represents the dataProviderAssignedUniqueID of the original Service Area feature.

[ Is static True. Containment is Not Specified. ]

 **serviceAreaSubType** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**serviceAreaSubType:****Optional**

A free-text equivalent of the serviceAreaType attribute value which may be used to reflect a source data value which is not precisely represented in the <**ServiceAreaTypeValue**> codelist

[ Is static True. Containment is Not Specified. ]

 **serviceAreaType** : ServiceAreaTypeValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


**serviceAreaType:****Mandatory (by convention)**

The type of the Service Area.

The values for this attribute are defined in the <**ServiceAreaTypeValue**> codelist.

[ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) linkedServiceArea


Source: Public (Class) Network «FeatureType»

Target: Public (Class) ServiceArea «FeatureType»

 Association (direction: Source -> Destination) serviceArea

Source: Public (Class) Relationship\_ActorToServiceArea «FeatureType»

Target: Public (Class) ServiceArea «FeatureType»

 Association (direction: Source -> Destination) linkedServiceArea

Source: Public (Class) Relationship\_NetworkToServiceArea «FeatureType»

Target: Public (Class) ServiceArea «FeatureType»

**ABSTRACT****1.4.50 Site**

*Class «FeatureType» in package 'NHDM-NUARData'*

**Site:**

## &lt;&lt;FeatureType&gt;&gt;

Representation of a specific site within a utility network

Created on 19/08/2021. Last modified 27/07/2022

ATTRIBUTES	
 <b>siteSubType</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>siteSubType:</b>  <b>Optional</b>  A free-text equivalent of the <b>siteType</b> attribute value which may be used to reflect a source data value which is not precisely represented in the <SiteTypeValue> codelist  [ Is static True. Containment is Not Specified. ]	
 <b>siteType</b> : SiteTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>SiteType:</b>  <b>Optional</b>  The type of the Site.  The values for this attribute are defined in the <SiteTypeValue> codelist.  [ Is static True. Containment is Not Specified. ]	
ASSOCIATIONS	
 Association (direction: Source -> Destination) isPartOf  Source: Public (Class) Site «FeatureType»	Target: Public (Class) Network «FeatureType»
 Association (direction: Source -> Destination) contains  Source: Public (Class) Site «FeatureType»	Target: Public (Class) NetworkAsset «FeatureType»
 Association (direction: Source -> Destination) linkedSite  Source: Public (Class) Relationship_SiteToSiteZoneOfInterest «FeatureType»	Target: Public (Class) Site «FeatureType»
 Association (direction: Source -> Destination) linkedObject  Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) Site «FeatureType»
 Association (direction: Source -> Destination) linkedSite  Source: Public (Class) Relationship_SiteToAsset «FeatureType»	Target: Public (Class) Site «FeatureType»
 Association (direction: Source -> Destination) linkedSite  Source: Public (Class) Relationship_NetworkToSite «FeatureType»	Target: Public (Class) Site «FeatureType»

## ASSOCIATIONS

 Association (direction: Source -> Destination) relatesTo

Source: Public (Class) SiteZoneOfInterest «FeatureType»

Target: Public (Class) Site «FeatureType»

## ABSTRACT

**1.4.51 SiteZoneOfInterest**

*Class «FeatureType» in package 'NHDM-NUARData'*

**SiteZoneOfInterest:**

<<FeatureType>>

A zone of interest which emanates from a Site, indicating a proximity within which enhanced measures may apply if undertaking work

Created on 20/08/2021. Last modified 27/07/2022

## ATTRIBUTES

 parentFeatureID : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**parentFeatureID:**

**Optional**

The **dataProviderAssignedUniqueID** value of the feature from which the Zone of Interest polygon is derived  
[ Is static True. Containment is Not Specified. ]

## ASSOCIATIONS

 Association (direction: Source -> Destination) relatesTo

Source: Public (Class) SiteZoneOfInterest «FeatureType»

Target: Public (Class) Site «FeatureType»

 Association (direction: Source -> Destination) linkedSiteZoneOfInterest

Source: Public (Class) Relationship\_SiteToSiteZoneOfInterest  
«FeatureType»

Target: Public (Class) SiteZoneOfInterest  
«FeatureType»

 Association (direction: Source -> Destination) linkedObject

Source: Public (Class) Relationship\_LinkedFile «FeatureType»

Target: Public (Class) SiteZoneOfInterest  
«FeatureType»

## ABSTRACT

**1.4.52 Structure**

*Class «FeatureType» in package 'NHDM-NUARData'*







**Structure:**




<<FeatureType>>

Representation of a structure that has a role in a utility network.



Created on 27/09/2021. Last modified 28/07/2022

ATTRIBUTES
<p> <b>container</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>container:</b> <b>Optional</b> The <b>dataProviderAssignedUniqueID</b> of any container object that directly encloses this Network Asset [ Is static True. Containment is Not Specified. ]</p>
<p> <b>dateOfInstallation</b> : Date Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dateOfInstallation:</b> <b>Optional</b> The date upon which the asset was installed, as specified by the Data Provider [ Is static True. Containment is Not Specified. ]</p>
<p> <b>insideHeight</b> : HeightType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>insideHeight:</b> <b>Optional</b> For circular shaped segments, not applicable. For non-circular shaped segments, the maximum inside height of the cross-sectional shape. For features other than segments, the maximum inside height of the feature. Units are always defined by <b>measurementUnit</b>. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>insideLength</b> : LengthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>insideLength:</b> <b>Optional</b> For segments, not applicable. For features other than segments, the maximum inside length of the feature (measured in the horizontal plane, perpendicular to the width). Units are always defined by <b>measurementUnit</b>. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>insideWidth</b> : WidthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>insideWidth:</b> <b>Optional</b> For circular shaped segments, if the Data Provider supplies a single diameter value, this value should be stored in <b>insideWidth</b>. If an inside and outside diameter are supplied, this attribute should represent the inside diameter. For non-circular shaped segments, the maximum inside width of the cross-sectional shape. For features other than segments, the maximum inside width of the feature. Units are always defined by <b>measurementUnit</b>. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>isEncased</b> : Boolean Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>isEncased:</b> <b>Optional</b> Indicator of the presence of encasement to insulate or protect the asset. Where the conveyance asset is contained within a “carrier” asset (e.g. as a result of replacement of metal with plastic pipes), and there is a requirement to represent the diameter of the carrier asset (see <b>outsideDiameter</b> below) this may be set to “True”. [ Is static True. Containment is Not Specified. ]</p>

ATTRIBUTES
<p> <b>outsideHeight</b> : HeightType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>outsideHeight:</b> <b>Optional</b> For circular shaped segments, not applicable. For non-circular shaped segments, the maximum outside height of the cross-sectional shape. For features other than segments, the maximum outside height of the feature. Units are always defined by <b>measurementUnit</b>.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>outsideLength</b> : LengthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>outsideLength:</b> <b>Optional</b> For segments, not applicable. For features other than segments, the maximum outside length of the feature (measured in the horizontal plane, perpendicular to the width). Units are always defined by <b>measurementUnit</b>.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>outsideWidth</b> : WidthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>outsideWidth:</b> <b>Optional</b> For circular shaped segments, if the Data Provider supplies an explicit outside diameter value, this value should be stored in outsideWidth. If a single diameter value is supplied, insidewidth should be used (see above). Where the conveyance asset is contained within a “carrier” asset (e.g. as a result of replacement of metal with plastic pipes), and there is a requirement to represent the diameter of the carrier asset, outsideDiameter should represent the supplied diameter of the carrier asset and <b>isEncased</b> be set to “True”. For non-circular shaped segments, the maximum outside width of the cross-sectional shape. For features other than segments, the maximum outside width of the feature. Units are always defined by <b>measurementUnit</b>.</p> <p>[ Is static True. Containment is Not Specified. ]</p>

### 1.4.53 SupplementalDataCoverage



Class «FeatureType» in package 'NHDM-NUARData'





#### SupplementalDataCoverage:

<<FeatureType>>

Representation of the geographical coverage of information linked to an area which is not defined by a Service Area or a Site. E.g. the coverage of custom backdrop data or supplemental information such as area-linked enlargement maps.

Created on 11/07/2022. Last modified 23/03/2024

ATTRIBUTES
<p> <b>coverageDataServiceType</b> : DataServiceTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>coverageDataServiceType:</b> <b>Optional</b> If a data service is associated with this coverage, this value specifies the type of the service. The values for this attribute are defined in the &lt;&lt;DataServiceTypeValue&gt;&gt; codelist.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> <b>coverageDataServiceURI</b> : CharacterString Public</p>

ATTRIBUTES					
<p>Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>coverageDataServiceURI:</b>  <b>Optional</b>            If a data service is associated with this coverage, this value specifies the URI used to access the service.            [ Is static True. Containment is Not Specified. ]</p>					
<p> coverageType : CharacterString Public = Other</p> <p><b>coverageType:</b>  <b>Optional</b>            The type of the coverage.            The values for this attribute are defined in the &lt;CoverageTypeValue&gt; codelist.            [ Is static True. Containment is Not Specified. ]</p>					
<p> drawingPriority : Integer Public = 0            Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>drawingPriority:</b>  <b>Optional</b>  <b>Default=0</b>            An indication of the z-order used to display coverage geometries.            [ Is static True. Containment is Not Specified. ]</p>					
ASSOCIATIONS					
<p> Association (direction: Source -&gt; Destination) linkedSupplementalDataCoverage</p> <table border="0"> <tr> <td>Source: Public (Class)</td><td>Target: Public (Class) SupplementalDataCoverage</td></tr> <tr> <td>Relationship_SupplementalDataCoverageToObject «FeatureType»</td><td>«FeatureType»</td></tr> </table>		Source: Public (Class)	Target: Public (Class) SupplementalDataCoverage	Relationship_SupplementalDataCoverageToObject «FeatureType»	«FeatureType»
Source: Public (Class)	Target: Public (Class) SupplementalDataCoverage				
Relationship_SupplementalDataCoverageToObject «FeatureType»	«FeatureType»				
<p> Association (direction: Source -&gt; Destination) coverage</p> <table border="0"> <tr> <td>Source: Public (Class) Relationship_CoverageToBackdropObject</td><td>Target: Public (Class) SupplementalDataCoverage</td></tr> <tr> <td>«FeatureType»</td><td>«FeatureType»</td></tr> </table>		Source: Public (Class) Relationship_CoverageToBackdropObject	Target: Public (Class) SupplementalDataCoverage	«FeatureType»	«FeatureType»
Source: Public (Class) Relationship_CoverageToBackdropObject	Target: Public (Class) SupplementalDataCoverage				
«FeatureType»	«FeatureType»				

## ABSTRACT

**1.4.54 Support**


*Class «FeatureType» in package 'NHDM-NUARData'*

**SupportObject:**

<<FeatureType>>

Structure serving primarily as a support, platform or foundation for another infrastructure component

Created on 19/08/2021. Last modified 27/07/2022

ATTRIBUTES
<p> supportSubType : CharacterString Public            Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>supportSubType:</b>  <b>Optional</b>            A free-text equivalent of the <b>supportType</b> attribute value which may be used to reflect a source data value which is not precisely represented in the &lt;SupportTypeValue&gt; codelist            [ Is static True. Containment is Not Specified. ]</p>

**ATTRIBUTES**

supportType : SupportTypeValue Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**supportType:****Mandatory (by convention)**

The type of the support object.

The values for this attribute are defined in the <SupportTypeValue> codelist.

[ Is static True. Containment is Not Specified. ]

## 1.4.55 TimePeriodType

Class «DataType» in package 'NHDM-NUARData'

**TimePeriodType:**

## &lt;&lt;DataType&gt;&gt;

A complex type for representing a Time Period

Created on 23/11/2021. Last modified 28/07/2022

**ATTRIBUTES**

period : Real Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**period:****Optional**

The time period value

[ Is static True. Containment is Not Specified. ]

unitOfTime : UnitOfTimeValue Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**unitOfTime:****Optional**

The unit of time for the **period** value.

Values for this attribute are defined in the <UnitOfTimeValue> codelist.

[ Is static True. Containment is Not Specified. ]

## 1.4.56 UUID

Class «Type» in package 'NHDM-NUARData'

Placeholder type to force ShapeChange to output attributes as UUIDs.

Created on 02/12/2021. Last modified 02/12/2021

## ABSTRACT

## 1.4.57 VariableObjectValue






Class «FeatureType» in package 'NHDM-NUARData'

**VariableObjectValue:**

## &lt;&lt;FeatureType&gt;&gt;

A means of specifying a point or segment on a linear feature for which a distinct value may be specified

Created on 21/08/2021. Last modified 28/07/2022

ATTRIBUTES	
 <b>dateOfCapture</b> : Date Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>dateOfCapture:</b> <b>Optional</b> Date upon which the value was observed or captured  [ Is static True. Containment is Not Specified. ]	
 <b>fromMeasure</b> : Measure Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>fromMeasure:</b> <b>Optional</b> A value specifying a point on the related linear feature in terms of a measure from the start of that feature. If this feature represents a segment, this value represents the “from” point of the segment. If this feature represents a point, this value represents that point.  [ Is static True. Containment is Not Specified. ]	
 <b>toMeasure</b> : Measure Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>toMeasure:</b> <b>Optional</b> A value specifying a point on the related linear feature in terms of a measure from the start of that feature. If this feature represents a segment, this value represents the “to” point of the segment. If this feature represents a point, this value should be NULL.  [ Is static True. Containment is Not Specified. ]	
ASSOCIATIONS	
 Association (direction: Source -> Destination) variableObjectValue  Source: Public (Class) VariableObjectValue «FeatureType» Cardinality: [0..*]  Target: Public (Class) NetworkAsset «FeatureType» Cardinality: [1]	
 Association (direction: Source -> Destination)  Source: Public (Class) Relationship_VariableObjectValueToAsset «FeatureType»  Target: Public (Class) VariableObjectValue «FeatureType»	

## 1.4.58 WidthType


Class «DataType» in package 'NHDM-NUARData'


### WidthType:

<<DataType>>

A complex type for representing Width

Created on 16/11/2021. Last modified 28/07/2022

ATTRIBUTES
 <b>unitOfMeasure</b> : MeasurementUnitsValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>unitOfMeasure:</b> <b>Optional</b>

ATTRIBUTES	
The unit of measure for the <b>width</b> value. Values for this attribute are defined in the <MeasurementUnitsValue> codelist. [ Is static True. Containment is Not Specified. ]	
 <b>width</b> : Real Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>width:</b> <b>Optional</b> The width value  [ Is static True. Containment is Not Specified. ]	

## 1.5 NHDM-NUAROrganisations

Package «ApplicationSchema» in package 'NHDM-Logical'

NHDM-NUAROrganisations  
Version 2.1.2 Published  
Created on 30/01/2023. Last modified 28/07/2024

### 1.5.1 NUAR Harmonised Data Model - Logical - NUAROrganisations diagram

GML diagram in package 'NHDM-NUAROrganisations'

NUAR Harmonised Data Model - Logical - NUAROrganisations  
Version 2.1.2  
Created on 30/01/2023. Last modified 29/07/2024



Figure 22: NUAR Harmonised Data Model - Logical - NUAROrganisations

## 1.5.2 Rules

Package in package 'NHDM-NUAROrganisations'

Rules

Version 2.1.2 Published

Created on 18/08/2021. Last modified 28/07/2024

### 1.5.2.1 NUAR Harmonised Data Model - Logical - Rules diagram

GML diagram in package 'Rules'

NUAR Harmonised Data Model - Logical - Rules  
Version 2.1.2  
Created on 18/08/2021. Last modified 28/07/2024

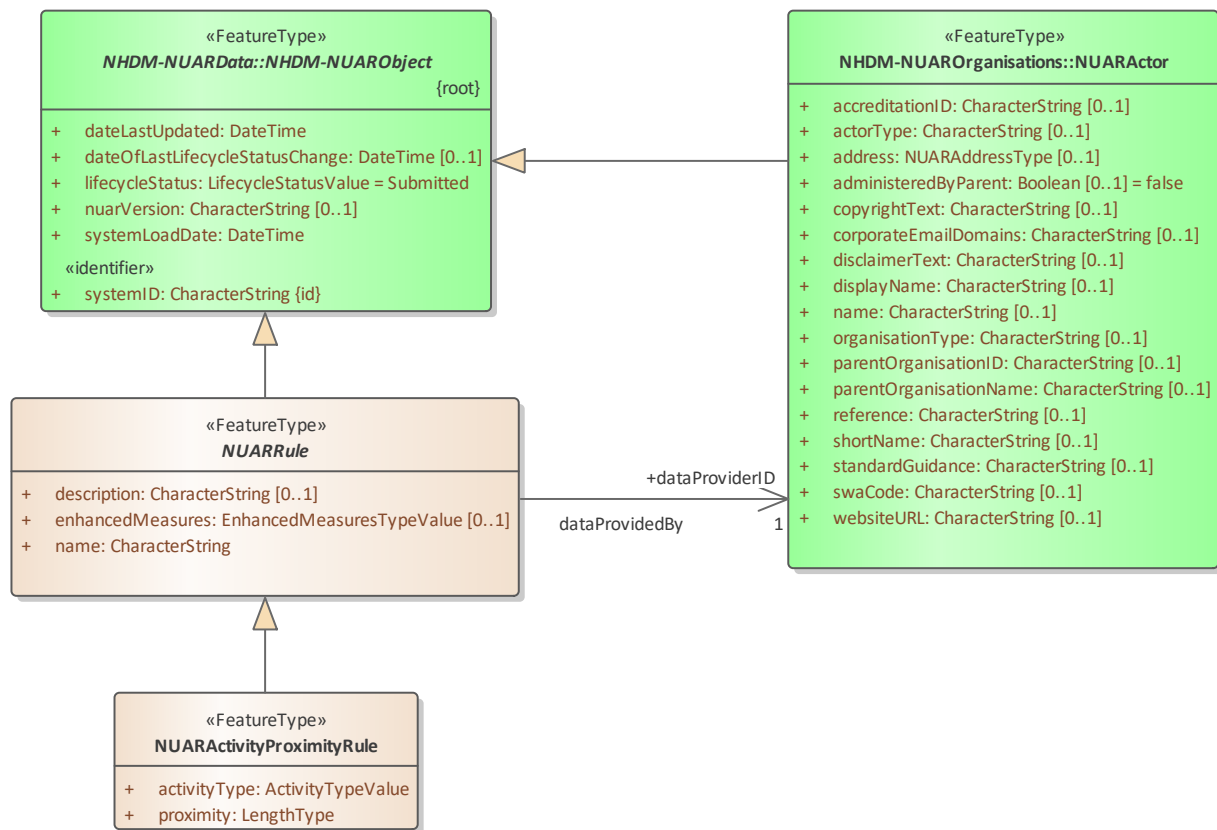


Figure 23: NUAR Harmonised Data Model - Logical - Rules

### 1.5.2.2 NUARActivityProximityRule

Class «FeatureType» in package 'Rules'

#### NUARActivityProximityRule:



<<FeatureType>>

A Feature Type allowing a rule to be specified which will be triggered by a given Activity Type being carried out in a given proximity to an asset or type of asset.

Created on 14/10/2022. Last modified 26/07/2024

ATTRIBUTES	
<p>activityType : ActivityTypeValue Public</p> <p><b>activityType:</b></p> <p><b>Mandatory</b> The Activity Type which triggers the rule. Values for activityType are defined in the &lt;ActivityTypeValue&gt; codelist</p>	[ Is static True. Containment is Not Specified. ]
<p>proximity : LengthType Public</p> <p><b>proximity:</b></p> <p><b>Mandatory</b> The proximity to an asset or type of asset for the Activity Type to trigger the rule.</p>	







ATTRIBUTES	
[ Is static True. Containment is Not Specified. ]	
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedRule Source: Public (Class) Relationship_ActorToRule «FeatureType»	Target: Public (Class) NUARActivityProximityRule «FeatureType»
 Association (direction: Source -> Destination) linkedRule Source: Public (Class) Relationship_RuleToNotification «FeatureType»	Target: Public (Class) NUARActivityProximityRule «FeatureType»

## ABSTRACT

**1.5.2.3 NUARRule**

*Class «FeatureType» in package 'Rules'*

Created on 14/10/2022. Last modified 14/10/2022

ATTRIBUTES	
 description : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 enhancedMeasures : EnhancedMeasuresTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 name : CharacterString Public	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) dataProvidedBy Source: Public (Class) NUARRule «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) linkedRule Source: Public (Class) Relationship_SubordinateNetworkToRule «FeatureType»	Target: Public (Class) NUARRule «FeatureType»
 Association (direction: Source -> Destination) linkedRule Source: Public (Class) Relationship_ObjectToRule «FeatureType»	Target: Public (Class) NUARRule «FeatureType»

## 1.5.3 NUARActor

Class «FeatureType» in package 'NHDM-NUAROrganisations'







### NUARActor:

#### <<FeatureType>>

Feature Type representing the organisations or actors who interact with the NUAR platform. This includes data providers, data owners and asset (object) owners and operators.

All entities in the database should have a Foreign Key identifying a record in <NUARActor> which represents the Data Provider for that entity.

Created on 27/10/2021. Last modified 30/01/2023


ATTRIBUTES
<p> accreditationID : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>accreditationID:</b> <b>Optional</b> The reference number or identifier for any relevant accreditation held by this organisation.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> actorType : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>actorType:</b> <b>Optional</b> The type of organisation (NUAR Actor) represented in terms of its relationship to the data held in NUAR. Values for actorType are defined in the &lt;ActorTypeValue&gt; codelist.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> address : NUARAddressType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>address:</b> <b>Optional</b> The address (e.g. head office or registered address of the legal entity) of the organisation. Represented by the &lt;NUARAddressType&gt; Data Type.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> administeredByParent : Boolean Public = false Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>administeredByParent:</b> <b>Optional</b> <b>Default=FALSE</b> A flag indicating whether an organisation is administered from a parent organisation.</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> copyrightText : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>copyrightText:</b> <b>Optional</b> Any copyright or legal text that applies to all data provided by this organisation, and which should be made available alongside that data</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> corporateEmailDomains : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p>

## ATTRIBUTES

**corporateEmailDomains:****Optional**

Semi-colon delimited string of email domains associated with this organisation (e.g. "nuar.co.uk;nuar.com;nuar.uk"). These will be used as one method to validate user email addresses as legitimately being linked to this organisation.

[ Is static True. Containment is Not Specified. ]

 disclaimerText : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**disclaimerText:****Optional**

Any disclaimer text that applies to all data provided by this organisation, and which should be made available alongside that data

[ Is static True. Containment is Not Specified. ]

 displayName : CharacterString Public


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**displayName:****Optional**

The name that should be displayed for this organisation when presented to end users.

Multiple subsidiary organisations may have the same display name if this is the name that has most meaning to end users.

[ Is static True. Containment is Not Specified. ]


 name : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**name:****Optional**

The full unique name of the legal entity represented by this NUAR Actor record. This should equate to the legal entity on whose behalf the DDA is signed.

[ Is static True. Containment is Not Specified. ]

 organisationType : CharacterString Public


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**organisationType:****Optional**

The role that this organisation fulfils in the NUAR platform.

Values for organisationType are defined in the <OrganisationTypeValue> codelist.

[ Is static True. Containment is Not Specified. ]

 parentOrganisationID : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**parentOrganisationID:****Optional**

The systemID of any parent organisation for this subsidiary organisation.

[ Is static True. Containment is Not Specified. ]

 parentOrganisationName : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**parentOrganisationName:****Optional**

The name of any parent organisation for this subsidiary organisation. Should match a **name** value in <NUARActor>.

[ Is static True. Containment is Not Specified. ]

 reference : CharacterString Public


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

## ATTRIBUTES

**reference:****Optional**

Representation of any reference assigned when the organisation is first included in an artefact tracking the organisation onboarding journey.

[ Is static True. Containment is Not Specified. ]

 shortName : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**shortName:****Optional**

A short or abbreviated name for the organisation which may be used for internal functions that, for example, do not allow spaces

[ Is static True. Containment is Not Specified. ]

 standardGuidance : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**standardGuidance:****Optional**

Some organisations may supply general safety guidance information to be displayed alongside organisation-level information, such as disclaimers and copyright information.

Properties:

size = 255

[ Is static True. Containment is Not Specified. ]

 swaCode : CharacterString Public

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**swaCode:****Optional**

The value in the Street Works Act (SWA) Code list associated with this organisation.

See:

<https://www.geoplace.co.uk/local-authority-resources/street-works-managers/view-swa-codes>

[ Is static True. Containment is Not Specified. ]

 websiteURL : CharacterString Public


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**websiteURL:****Optional**

The URL for this organisation's corporate website

[ Is static True. Containment is Not Specified. ]


## ASSOCIATIONS

 Association (direction: Source -> Destination) linkedServiceProvider

Source: Public (Class)

Relationship\_ServiceProviderToOrganisation «FeatureType»

Target: Public (Class) NUARActor «FeatureType»

 Association (direction: Source -> Destination) dataProvidedBy

Source: Public (Class) NUARContactDetails «FeatureType»

Target: Public dataProviderID (Class) NUARActor «FeatureType»

Cardinality: [1]

 Association (direction: Source -> Destination) dataProvider

ASSOCIATIONS	
Source: Public (Class) NUARSubmission «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARRule «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARSubordinateNetworkDefinition «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) MUDDIOBJECT «FeatureType»	Target: Public dataProviderID_FK (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARRelationship «FeatureType»	Target: Public dataProviderID_FK (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) MUDDIOBJECT «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination)	
<b>nuarActorID:</b> <b>Mandatory</b> The system ID of the <NUARActor> record for the organisation whose visibility scope is being specified for the Observation.	
Source: Public (Class) ObservationOrganisationVisibilityScope «FeatureType»	Target: Public nuarActorID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) serviceProvider	
Source: Public (Class) NUARSubmission «FeatureType»	Target: Public serviceProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) ruleDefinedBy	
Source: Public (Class) Relationship_ActorToRule «FeatureType»	Target: Public (Class) NUARActor «FeatureType»
 Association (direction: Source -> Destination)	
<b>originatingOrganisationID:</b> <b>Mandatory</b> The systemID in <NUARActor> of the organisation the raising user is acting on behalf of. For non-supply chain organisations	

ASSOCIATIONS	
this will be the same as <b>originatingOrganisationID</b> .	
Source: Public (Class) ObservationObject «FeatureType»	Target: Public onBehalfOfOrganisationID (Class) NUARActor «FeatureType» Cardinality: [0..1]
 Association (direction: Source -> Destination) linkedActor	
Source: Public (Class) Relationship_ActorToSubmissionDomain «FeatureType»	Target: Public (Class) NUARActor «FeatureType»
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARBackdropObject «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) linkedOrganisation	
Source: Public (Class) Relationship_ServiceProviderToOrganisation «FeatureType»	Target: Public (Class) NUARActor «FeatureType»
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARBackdropObject «FeatureType»	Target: Public dataProviderID_FK (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARSubmissionEvent «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) belongsTo	
Source: Public (Class) Relationship_ActorToServiceArea «FeatureType»	Target: Public (Class) NUARActor «FeatureType»
 Association (direction: Source -> Destination) linkedActor	
Source: Public (Class) Relationship_ActorToContactDetails «FeatureType»	Target: Public (Class) NUARActor «FeatureType»
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARRelationship «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]

## 1.5.4 NUARContactDetails

Class «FeatureType» in package 'NHDM-NUAROrganisations'




**NUARContactDetails:**  
 <<FeatureType>>

Feature Type representing contact details which may be associated with organisations (NUARActors) or features in the NUAR database

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES
<p> address : NUARAddressType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>address:</b> <b>Optional</b> The physical Address element of the contact details</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> contactDetailsType : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>contactDetailsType:</b> <b>Optional</b> The type of Contact Details represented. Values for contactDetailsType are defined in the &lt;ContactDetailsTypeValue&gt; codelist</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> departmentName : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>departmentName:</b> <b>Optional</b> The Department Name element of the contact details</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> emailAddress : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>emailAddress:</b> <b>Optional</b> The Email Address element of the contact details</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> organisationName : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>organisationName:</b> <b>Optional</b> The name of the organisation for which the Contact Details apply. Should match a <b>name</b> value in &lt;NUARActor&gt;</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> telephoneNumber : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>telephoneNumber:</b> <b>Optional</b> The Telephone Number element of the contact details</p> <p>[ Is static True. Containment is Not Specified. ]</p>
<p> webForm : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>webForm:</b> <b>Optional</b> A link to a web form which can be used as a means of contact.</p>

ATTRIBUTES	
[ Is static True. Containment is Not Specified. ]	

ASSOCIATIONS	
 Association (direction: Source -> Destination) dataProvidedBy	
Source: Public (Class) NUARContactDetails «FeatureType»	Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) linkedContactDetails	
Source: Public (Class) Relationship_ActorToContactDetails «FeatureType»	Target: Public (Class) NUARContactDetails «FeatureType»
 Association (direction: Source -> Destination) linkedContactDetails	
Source: Public (Class) Relationship_ObjectToContactDetails «FeatureType»	Target: Public (Class) NUARContactDetails «FeatureType»

## 1.5.5 Relationship\_ActorToContactDetails


Class «FeatureType» in package 'NHDM-NUAROrganisations'



### Relationship\_ActorToContactDetails:

<<FeatureType>>

Representation of the relationship between an organisation and contact details for the organisation.

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES	
 linkedActorID : CharacterString Public  <b>linkedActorID:</b> <b>Mandatory</b> The systemID of the <NUARActor> record in the relationship	
[ Is static True. Containment is Not Specified. ]	
 linkedContactDetailsID : CharacterString Public  <b>linkedContactDetailsID:</b> <b>Mandatory</b> The systemID of the <NUARContactDetails> record in the relationship	
[ Is static True. Containment is Not Specified. ]	

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedContactDetails	
Source: Public (Class) Relationship_ActorToContactDetails «FeatureType»	Target: Public (Class) NUARContactDetails «FeatureType»
 Association (direction: Source -> Destination) linkedActor	
Source: Public (Class) Relationship_ActorToContactDetails	Target: Public (Class) NUARActor «FeatureType»



## ASSOCIATIONS


«FeatureType»

## 1.5.6 Relationship\_ActorToRule


Class «FeatureType» in package 'NHDM-NUAROrganisations'

Created on 27/07/2024. Last modified 27/07/2024


## ATTRIBUTES

 actorID : CharacterString Public

[ Is static True. Containment is Not Specified. ]


 ruleID : CharacterString Public

[ Is static True. Containment is Not Specified. ]

 ruleTableName : CharacterString Public

[ Is static True. Containment is Not Specified. ]

## ASSOCIATIONS

 Association (direction: Source -> Destination) ruleDefinedBy

Source: Public (Class) Relationship\_ActorToRule «FeatureType»

Target: Public (Class) NUARActor «FeatureType»

 Association (direction: Source -> Destination) linkedRule

Source: Public (Class) Relationship\_ActorToRule «FeatureType»

Target: Public (Class)  
NUARActivityProximityRule «FeatureType»

## 1.5.7 Relationship\_ActorToServiceArea

Class «FeatureType» in package 'NHDM-NUAROrganisations'

**Relationship\_ActorToServiceArea:**

<<FeatureType>>

Representation of the relationship between an organisation and a Service Area, and the purpose that the Service Area serves for that organisation

Created on 27/07/2024. Last modified 27/07/2024

## ATTRIBUTES

 actorID : CharacterString Public





**actorID:**

**Mandatory**

The systemID of the <NUARActor> record in the relationship

[ Is static True. Containment is Not Specified. ]



 serviceAreaID : CharacterString Public


ATTRIBUTES	
<b>serviceAreaID:</b> <b>Mandatory</b> The dataProviderAssignedUniqueID of the <ServiceArea> record in the relationship [ Is static True. Containment is Not Specified. ]	
 serviceAreaName : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>serviceAreaName:</b> <b>Optional</b> The name of the Service Area in the as used by the related organisation [ Is static True. Containment is Not Specified. ]	
 serviceAreaPurpose : ServiceAreaPurposeValue Public  <b>serviceAreaPurpose:</b> <b>Mandatory</b> The purpose for which this service area is used by the related organisation. The values for this attribute are defined in the <ServiceAreaPurposeValue> codelist. [ Is static True. Containment is Not Specified. ]	
 utilityType : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>utilityType:</b> <b>Optional</b> Type of utility service associated with the related Service Area. [ Is static True. Containment is Not Specified. ]	
ASSOCIATIONS	
 Association (direction: Source -> Destination) serviceArea  Source: Public (Class) Relationship_ActorToServiceArea «FeatureType»      Target: Public (Class) ServiceArea «FeatureType»	
 Association (direction: Source -> Destination) belongsTo  Source: Public (Class) Relationship_ActorToServiceArea «FeatureType»      Target: Public (Class) NUARActor «FeatureType»	

## 1.5.8 Relationship\_ActorToSubmissionDomain

Class «FeatureType» in package 'NHDM-NUAROrganisations'

Created on 27/07/2024. Last modified 27/07/2024





ATTRIBUTES	
 linkedActorID : CharacterString Public [ Is static True. Containment is Not Specified. ]	
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedSubmissionDomain	


ASSOCIATIONS	
Source: Public (Class) Relationship_ActorToSubmissionDomain «FeatureType»	Target: Public (Class) DomainNetworkTable «FeatureType»
 Association (direction: Source -> Destination) linkedActor	
Source: Public (Class) Relationship_ActorToSubmissionDomain «FeatureType»	Target: Public (Class) NUARActor «FeatureType»

## 1.5.9 Relationship\_RuleToNotification

Class «FeatureType» in package 'NHDM-NUAROrganisations'

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES	
 notificationTarget : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 notificationType : RuleNotificationTypeValue Public Multiplicity: ( [ 0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 ruleID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 ruleTableName : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedRule	
Source: Public (Class) Relationship_RuleToNotification «FeatureType»	Target: Public (Class) NUARActivityProximityRule «FeatureType»

## 1.5.10 Relationship\_ServiceProviderToOrganisation

Class «FeatureType» in package 'NHDM-NUAROrganisations'


**Relationship\_ServiceProviderToOrganisation:**

<<FeatureType>>

Representation of the relationship between a Service Provider organisation and an organisation to which those services are provided (e.g. a provider of data transformation services being related to an Asset Owner organisation whose data it transforms).

Created on 27/07/2024. Last modified 27/07/2024

ATTRIBUTES
 linkedOrganisationID : CharacterString Public

ATTRIBUTES	
<b>linkedOrganisationID:</b> <b>Mandatory</b> The systemID of the <NUARActor> record for the Organisation on whose behalf the service is being provided. [ Is static True. Containment is Not Specified. ]	
 linkedServiceProviderOrganisationID : CharacterString Public  <b>linkedServiceProviderOrganisationID:</b> <b>Mandatory</b> The systemID of the <NUARActor> record for the Service Provider organisation. [ Is static True. Containment is Not Specified. ]	
 serviceType : ServiceProviderTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>serviceType:</b> <b>Optional</b> The type of service provided by the Service Provider to the Organisation. The values for this attribute are defined in the <ServiceProviderTypeValue> codelist. [ Is static True. Containment is Not Specified. ]	
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedServiceProvider  Source: Public (Class) Relationship_ServiceProviderToOrganisation «FeatureType»	Target: Public (Class) NUARActor «FeatureType»
 Association (direction: Source -> Destination) linkedOrganisation  Source: Public (Class) Relationship_ServiceProviderToOrganisation «FeatureType»	Target: Public (Class) NUARActor «FeatureType»

## 1.6 NHDM-NUARSubmissions

Package «ApplicationSchema» in package 'NHDM-Logical'

NHDM-NUARSubmissions

Version 2.1.2 Published

Created on 26/01/2023. Last modified 28/07/2024

### 1.6.1 NUAR Harmonised Data Model - Logical - NUARSubmissions diagram

GML diagram in package 'NHDM-NUARSubmissions'

NUAR Harmonised Data Model - Logical - NUARSubmissions

Version 2.1.2

Created on 26/01/2023. Last modified 28/07/2024

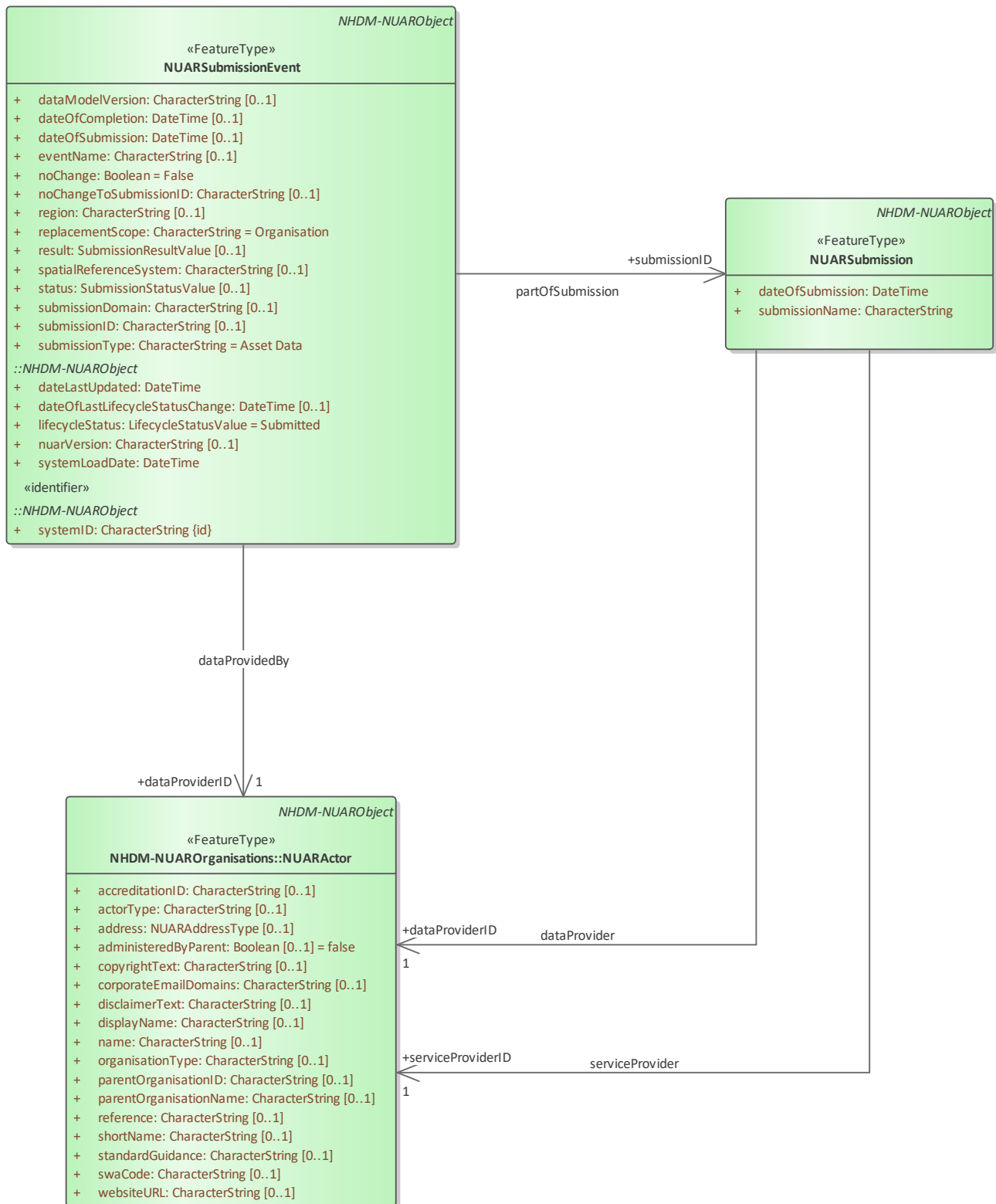



Figure 24: NUAR Harmonised Data Model - Logical - NUARSubmissions

## 1.6.2 NUARSubmission

Class «FeatureType» in package 'NHDM-NUARSubmissions'

Created on 24/04/2024. Last modified 24/04/2024

ATTRIBUTES	
 dateOfSubmission : DateTime Public <div>[ Is static True. Containment is Not Specified. ]</div>	
 submissionName : CharacterString Public <div>[ Is static True. Containment is Not Specified. ]</div>	
ASSOCIATIONS	
 Association (direction: Source -> Destination) dataProvider Source: Public (Class) NUARSubmission «FeatureType» Target: Public dataProviderID (Class) NUARActor «FeatureType» Cardinality: [1]	
 Association (direction: Source -> Destination) serviceProvider Source: Public (Class) NUARSubmission «FeatureType» Target: Public serviceProviderID (Class) NUARActor «FeatureType» Cardinality: [1]	
 Association (direction: Source -> Destination) partOfSubmission Source: Public (Class) NUARSubmissionEvent «FeatureType» Target: Public submissionID (Class) NUARSubmission «FeatureType»	

### 1.6.3 NUARSubmissionEvent



Class «FeatureType» in package 'NHDM-NUARSubmissions'

#### NUARSubmissionEvent:

<<FeatureType>>

Feature Type representing individual "data load events" (e.g. 1Integrate sessions).

Created on 10/11/2021. Last modified 06/06/2023

ATTRIBUTES
 dataModelVersion : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>dataModelVersion:</b> <b>Optional</b> The version number of the NUAR data model at the time of this submission event. <div>[ Is static True. Containment is Not Specified. ]</div>
 dateOfCompletion : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>dateOfCompletion:</b> <b>Optional</b> Date and time upon which the submission event completes, as opposed to the existing <i>dateOfSubmission</i> attribute which is assumed to represent the date and time of initiation. Must be populated if Status='Completed' <div>[ Is static True. Containment is Not Specified. ]</div>

## ATTRIBUTES

◆ dateOfSubmission : DateTime Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**dateOfSubmission:****Optional**

The date and time at which the data load event was initiated

[ Is static True. Containment is Not Specified. ]

◆ eventName : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**eventName:****Optional**

Any name assigned to the data load event by the system managing the data load process.

[ Is static True. Containment is Not Specified. ]

◆ noChange : Boolean Public = False

**noChange:****Mandatory****Default = FALSE**

A flag to indicate whether the submission represents a statement of “No Change” relative to a previous submission whose ID is specified in the *noChangeToSubmissionID* attribute.

A No Change submission results in the dateLastUpdated value being set to the submission date for all features related to the previous submission for which “No Change” is being asserted.

[ Is static True. Containment is Not Specified. ]

◆ noChangeToSubmissionID : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**noChangeToSubmissionID:****Optional**

Must be specified if noChange=TRUE.

The systemID value of a previous submission for which No Change is specified in a subsequent submission.

Properties:

size = 38

[ Is static True. Containment is Not Specified. ]

◆ region : CharacterString Public  
 Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**region:****Optional**

The name of the data provider's region or sub-area to which this submission is related.

[ Is static True. Containment is Not Specified. ]

◆ replacementScope : CharacterString Public = Organisation

**replacementScope:****Mandatory****Default = 'Organisation'**

A value which specifies the level at which the content of this submission supersedes, and replaces, the content of a previous submission.

It effectively specifies which features should be deleted from the publication database before inserting the features in the latest submission.

Values for replacementScope are defined in the <SubmissionReplacementScopeValue> codelist.

Possible values are as follows:

> **None**

No features are removed before publishing features from the current submission.

**ATTRIBUTES****> Organisation (default)**

All features related to the Submission Asset Owner are removed prior to publishing the features in the current submission. This effectively represents a full republish of data for the specified organisation.

**> Submission**

This mechanism can be used to replace data for a specific predecessor submission only.

A previous submission must be specified in the *NUARSubmissionSubmissionReplacement* Feature Type and all features related to that previous Submission will be removed before publishing features from the current submission.

**> Dataset**

This mechanism can be used to replace data for specific datasets only.

A *NUARSourceDataset* record must be related to the current submission in the *NUARSubmissionDatasetReplacement* Feature Type. All features for the organisation related to the current submission with a *sourceFeatureClass* value the same as that associated with the Dataset will be removed before publishing features from the current submission.

**> Area**

This mechanism can be used to replace data for specific sites or geographical areas only.


A Site or Network must be related to the current submission in the *NUARSubmissionAreaReplacement* Feature Type, along with the schema and name of the relationship table which relates that Site/Network to features within it. All features related to the specified area via the specified relationship table will be removed before publishing records from the current submission.

**> Feature**

This mechanism can be used to replace specific features only.

Features, including their schema and table name, must be related to the current submission in the *NUARSubmissionFeatureReplacement* Feature Type. The features with these *dataProviderAssignedUniqueID* values in these tables will be removed before publishing records from the current submission.

[ Is static True. Containment is Not Specified. ]


 **result** : SubmissionResultValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**result:****Optional**

Indicates the result of a submission event.

Values for result are defined in the <SubmissionResultValue> codelist.

[ Is static True. Containment is Not Specified. ]

 **spatialReferenceSystem** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**spatialReferenceSystem:****Optional**

The horizontal CRS values associated with the features within it. If there is more than one distinct value, this should be a semicolon-delimited list.

[ Is static True. Containment is Not Specified. ]


 **status** : SubmissionStatusValue Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**status:****Optional**

Indicates the current status of a submission event.

Values for status are defined in the <SubmissionStatusValue> codelist.

[ Is static True. Containment is Not Specified. ]

 **submissionDomain** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**submissionDomain:****Optional**

The domain or sector to which the Submission relates.

[ Is static True. Containment is Not Specified. ]

 **submissionID** : CharacterString Public  
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )


**submissionID:**



**ATTRIBUTES****Optional**

Any identifier assigned to the data load event by the system managing the data load process.

[ Is static True. Containment is Not Specified. ]

 submissionType : CharacterString Public = Asset Data

**submissionType:****Mandatory**


**Default = 'Asset Data'**

Indicates the type of data being supplied as part of a submission.

Values for submissionType are defined in the <SubmissionTypeValue> codelist.


[ Is static True. Containment is Not Specified. ]

**ASSOCIATIONS**

 Association (direction: Source -> Destination) partOfSubmission


Source: Public (Class) NUARSubmissionEvent «FeatureType»

Target: Public submissionID (Class)  
NUARSubmission «FeatureType»

 Association (direction: Source -> Destination) dataProvidedBy


Source: Public (Class) NUARSubmissionEvent «FeatureType»

Target: Public dataProviderID (Class) NUARActor  
«FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring


Source: Public (Class) NUARRelationship «FeatureType»

Target: Public submissionEventID (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring


Source: Public (Class) NUARBackdropObject «FeatureType»

Target: Public submissionEventID (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring


Source: Public (Class) MUDDIOObject «FeatureType»

Target: Public submissionEventID\_FK (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring


Source: Public (Class) MUDDIOObject «FeatureType»


Target: Public submissionEventID (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring

Source: Public (Class) NUARBackdropObject «FeatureType»

Target: Public submissionEventID\_FK (Class)  
NUARSubmissionEvent «FeatureType»  
Cardinality: [1]

 Association (direction: Source -> Destination) dataSubmittedDuring

ASSOCIATIONS	
Source: Public (Class) NUARRelationship «FeatureType»	Target: Public submissionEventID_FK (Class) NUARSubmissionEvent «FeatureType» Cardinality: [1]
 Association (direction: Source -> Destination) dataSubmittedDuring	
Source: Public (Class) NUARSubordinateNetworkDefinition «FeatureType»	Target: Public submissionEventID (Class) NUARSubmissionEvent «FeatureType» Cardinality: [1]

## 1.7 NHDM-NUARUserCreatedData

### Package «ApplicationSchema» in package 'NHDM-Logical'

NHDM-NUARUserCreatedData

Version 2.1.2 Published

Created on 31/01/2023. Last modified 28/07/2024

### 1.7.1 NUAR Harmonised Data Model - Logical - NUARUserCreatedData diagram

*GML diagram in package 'NHDM-NUARUserCreatedData'*

NUAR Harmonised Data Model - Logical - NUARUserCreatedData

Version 2.1.2

Created on 31/01/2023. Last modified 28/07/2024

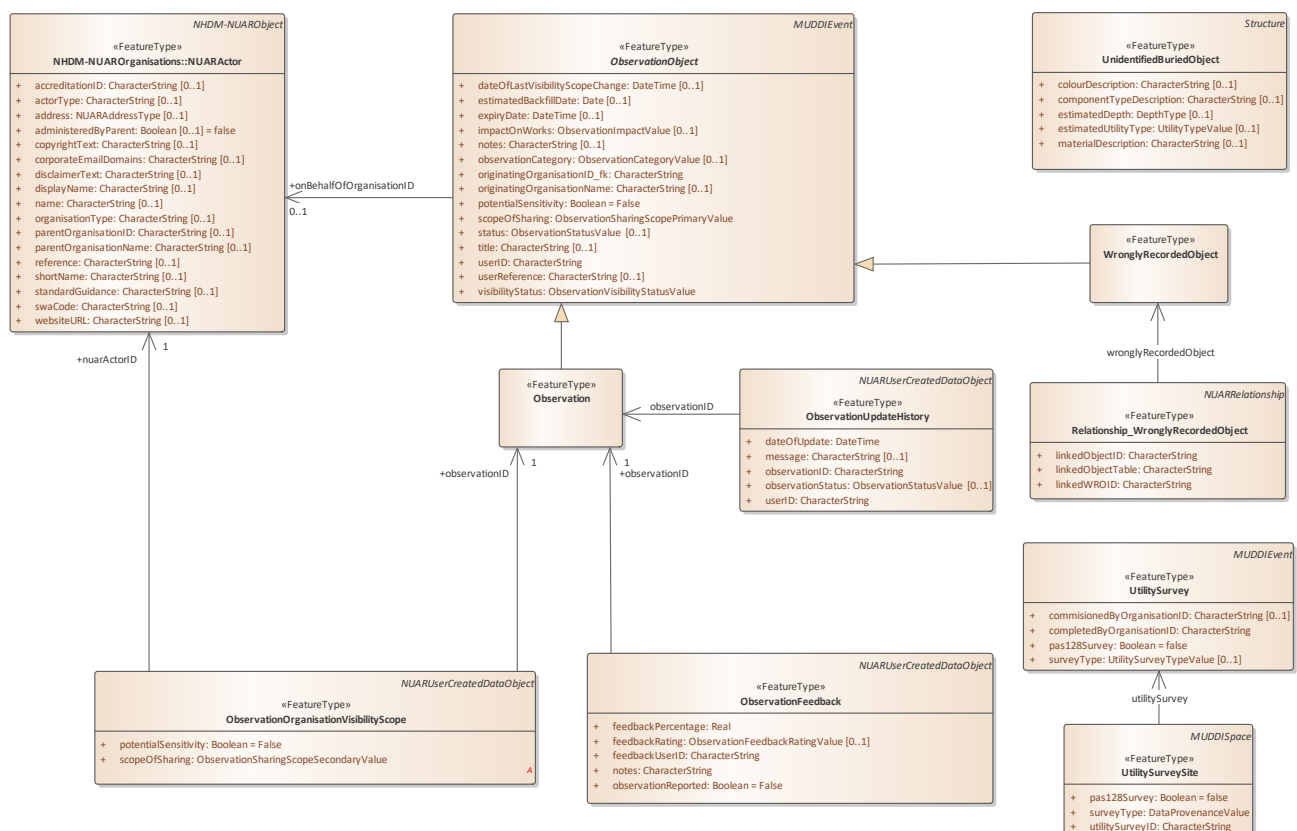



Figure 25: NUAR Harmonised Data Model - Logical - NUARUserCreatedData

## ABSTRACT

## 1.7.2 NUARUserCreatedDataObject

*Class «FeatureType» in package 'NHDM-NUARUserCreatedData'*

Created on 13/06/2023. Last modified 13/06/2023

ATTRIBUTES
 systemID : CharacterString Public Properties: size = 38 <div style="text-align: right;">[ Stereotype is «identifier». Is static True. Containment is Not Specified. ]</div>




## 1.7.3 Observation

*Class «FeatureType» in package 'NHDM-NUARUserCreatedData'***Observation:**

&lt;&lt;FeatureType&gt;&gt;

An Observation recorded by a NUAR user related to the data, or more generally to the location at which they are located

Created on 23/02/2024. Last modified 23/02/2024

ASSOCIATIONS
 Association (direction: Source -> Destination) observationID Source: Public (Class) ObservationUpdateHistory «FeatureType»      Target: Public (Class) Observation «FeatureType»
 Association (direction: Source -> Destination) <b>observationID:</b> <b>Mandatory</b> The system ID of the Observation for which feedback is being provided. Source: Public (Class) ObservationFeedback «FeatureType»      Target: Public observationID (Class) Observation «FeatureType» <div style="text-align: right;">Cardinality: [1]</div>
 Association (direction: Source -> Destination) <b>observationID:</b> <b>Mandatory</b> The system ID of the <<Observation>> record whose visibility scope is being specified for the Organisation. Source: Public (Class) ObservationOrganisationVisibilityScope «FeatureType»      Target: Public observationID (Class) Observation «FeatureType» <div style="text-align: right;">Cardinality: [1]</div>

## 1.7.4 ObservationFeedback







*Class «FeatureType» in package 'NHDM-NUARUserCreatedData'*

**ObservationFeedback:**

&lt;&lt;FeatureType&gt;&gt;

Feedback provided by users on the nature or usefulness of an Observation.

Created on 13/06/2023. Last modified 23/03/2024

ATTRIBUTES	
 feedbackPercentage : Real Public  <b>feedbackPercentage:</b> <b>Mandatory</b> An indication of the usefulness of the Observation as a percentage.	[ Is static True. Containment is Not Specified. ]
 feedbackRating : ObservationFeedbackRatingValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>feedbackrating:</b> <b>Optional</b> A general rating for the Observation. The values for this attribute are defined in the <ObservationFeedbackRatingValue> codelist.	[ Is static True. Containment is Not Specified. ]
 feedbackUserID : CharacterString Public  <b>feedbackUserID:</b> <b>Mandatory</b> The User ID of the user leaving the feedback.	[ Is static True. Containment is Not Specified. ]
 notes : CharacterString Public  <b>notes:</b> <b>Mandatory</b> Free text feedback on the Observation.  Properties: size = 200	[ Is static True. Containment is Not Specified. ]
 observationReported : Boolean Public = False  <b>observationReported:</b> <b>Mandatory</b> <b>Default=FALSE</b> An indication as to whether the Observation has been reported for inappropriate content.	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination)  <b>observationID:</b> <b>Mandatory</b> The system ID of the Observation for which feedback is being provided.  Source: Public (Class) ObservationFeedback «FeatureType»	Target: Public observationID (Class) Observation «FeatureType» Cardinality: [1]

## ABSTRACT

**1.7.5 ObservationObject**







*Class «FeatureType» in package 'NHDM-NUARUserCreatedData'*

**ObservationObject:**

<<FeatureType>>

Abstract class holding common attribution for Observation & WronglyRecordedObject.

Created on 23/08/2021. Last modified 23/02/2024


ATTRIBUTES
<p> <b>dateOfLastVisibilityScopeChange</b> : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>dateOfLastVisibilityScopeChange:</b> <b>Optional</b> The date upon which the visibility scope of the Observation was last changed [ Is static True. Containment is Not Specified. ]</p>
<p> <b>estimatedBackfillDate</b> : Date Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>estimatedBackfillDate:</b> <b>Optional</b> If available, an estimate of the date upon which any excavation exposing assets to which the Observation relates will be backfilled [ Is static True. Containment is Not Specified. ]</p>
<p> <b>expiryDate</b> : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>expiryDate:</b> <b>Optional</b> A date beyond which the observation should no longer be displayed. E.g. for reporting temporary conditions. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>impactOnWorks</b> : ObservationImpactValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>impactOnWorks:</b> <b>Optional</b> An indication of the impact of the conditions observed upon the works being undertaken. The values for this attribute are defined in the &lt;ObservationImpactValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>notes</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>notes:</b> <b>Optional</b> Any additional notes or commentary pertaining to the Observation. May include links to external files and resources as required. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>observationCategory</b> : ObservationCategoryValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>observationCategory:</b> <b>Optional</b></p>

**ATTRIBUTES**

The category to which the Observation belongs.

The values for this attribute are defined in the <**ObservationCategoryValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **originatingOrganisationID\_fk** : **CharacterString** **Public**

**originatingOrganisationID:**

**Mandatory**

The systemID in <**NUARActor**> of the organisation the raising user is directly associated with. The Foreign Key to the <**NUARActor**> table doesn't work for supply chain organisations as these are only represented in the platform database not the asset database.

Properties:

length = 38

[ Is static True. Containment is Not Specified. ]

 **originatingOrganisationName** : **CharacterString** **Public**


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**originatingOrganisationName:**

**Optional**

The name of the organisation the raising user is directly associated with.

[ Is static True. Containment is Not Specified. ]

 **potentialSensitivity** : **Boolean** **Public** = False

**potentialSensitivity:**

**Mandatory**

**Default=FALSE**

A flag indicating that an Observation may have some sensitivity attached to it based on its location or proximity to a sensitive site or asset.

[ Is static True. Containment is Not Specified. ]

 **scopeOfSharing** : **ObservationSharingScopePrimaryValue** **Public**


**scopeOfSharing:**

**Mandatory**

Defines the extent to which an Observation is shared (visible) across the user base and organisation hierarchies.

The values for this attribute are defined in the <**ObservationSharingScopePrimaryValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **status** : **ObservationStatusValue** **Public**

Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**status:**

**Optional**

The current status of the Observation.

The values for this attribute are defined in the <**ObservationStatusValue**> codelist.

[ Is static True. Containment is Not Specified. ]

 **title** : **CharacterString** **Public**


Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )

**title:**



**Optional**




The Title of the Observation.

[ Is static True. Containment is Not Specified. ]

 **userID** : **CharacterString** **Public**

**userID:**

ATTRIBUTES	
<b>Mandatory</b> The identifier of the user that created the Observation. [ Is static True. Containment is Not Specified. ]	
 userReference : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>userReference:</b> <b>Optional</b> A reference for the Observation, e.g. a scheme or job name. [ Is static True. Containment is Not Specified. ]	
 visibilityStatus : ObservationVisibilityStatusValue Public  <b>visibilityStatus:</b> <b>Mandatory</b> Defines the overall state of visibility of the Observation, independently of the sharing scope. The values for this attribute are defined in the <ObservationVisibilityStatusValue> codelist. [ Is static True. Containment is Not Specified. ]	

ASSOCIATIONS	
 Association (direction: Source -> Destination)  <b>originatingOrganisationID:</b> <b>Mandatory</b> The systemID in <NUARActor> of the organisation the raising user is acting on behalf of. For non-supply chain organisations this will be the same as <b>originatingOrganisationID</b> .  Source: Public (Class) ObservationObject «FeatureType»      Target: Public onBehalfOfOrganisationID (Class) NUARActor «FeatureType» Cardinality: [0..1]	
 Association (direction: Source -> Destination) linkedObject  Source: Public (Class) Relationship_LinkedFile «FeatureType»      Target: Public (Class) ObservationObject «FeatureType»	
 Association (direction: Source -> Destination) linkedObject  Source: Public (Class) Relationship_LinkedFile «FeatureType»      Target: Public (Class) ObservationObject «FeatureType»	

## 1.7.6 ObservationOrganisationVisibilityScope


Class «FeatureType» in package 'NHDM-NUARUserCreatedData'


### ObservationFeedback:



<<FeatureType>>

Representation of the Visibility Scope of an Observation for a specified Organisation.

Created on 13/06/2023. Last modified 23/03/2024

ATTRIBUTES
 potentialSensitivity : Boolean Public = False  <b>potentialSensitivity:</b>





ATTRIBUTES
<p><b>Mandatory</b> <b>Default=FALSE</b> A flag indicating that an Observation may have some sensitivity attached to it based on its location or proximity to a sensitive site or asset for the Organisation in question. [ Is static True. Containment is Not Specified. ]</p>
<p> scopeOfSharing : ObservationSharingScopeSecondaryValue Public</p> <p><b>scopeOfSharing:</b> <b>Mandatory</b> Defines the extent to which an Observation is shared (visible) for the Organisation in question. The values for this attribute are defined in the &lt;ObservationSharingScopeSecondaryValue&gt; codelist. [ Is static True. Containment is Not Specified. ]</p>

ASSOCIATIONS
<p> Association (direction: Source -&gt; Destination)</p> <p><b>nuarActorID:</b> <b>Mandatory</b> The system ID of the &lt;NUARActor&gt; record for the organisation whose visibility scope is being specified for the Observation.</p> <p>Source: Public (Class) ObservationOrganisationVisibilityScope «FeatureType» Target: Public nuarActorID (Class) NUARActor «FeatureType» Cardinality: [1]</p>
<p> Association (direction: Source -&gt; Destination)</p> <p><b>observationID:</b> <b>Mandatory</b> The system ID of the &lt;Observation&gt; record whose visibility scope is being specified for the Organisation.</p> <p>Source: Public (Class) ObservationOrganisationVisibilityScope «FeatureType» Target: Public observationID (Class) Observation «FeatureType» Cardinality: [1]</p>



## 1.7.7 ObservationUpdateHistory

Class «FeatureType» in package 'NHDM-NUARUserCreatedData'

Created on 06/02/2024. Last modified 06/02/2024

ATTRIBUTES
<p> dateOfUpdate : DateTime Public [ Is static True. Containment is Not Specified. ]</p>
<p> message : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False ) [ Is static True. Containment is Not Specified. ]</p>
<p> observationID : CharacterString Public [ Is static True. Containment is Not Specified. ]</p>
<p> observationStatus : ObservationStatusValue Public</p>



ATTRIBUTES	
Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 userID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) observationID	
Source: Public (Class) ObservationUpdateHistory «FeatureType»	Target: Public (Class) Observation «FeatureType»

## 1.7.8 Relationship\_WronglyRecordedObject





Class «FeatureType» in package 'NHDM-NUARUserCreatedData'

### Relationship\_WronglyRecordedObject

<<FeatureType>>

Table of relationships between wrongly recorded object records and their associated objects. These relationships are not enforced in the physical schema, but will be set up at the ingestion/transformation phase.

Created on 21/02/2022. Last modified 31/01/2023

ATTRIBUTES	
 linkedObjectID : CharacterString Public	
<b>linkedObjectID:</b> <<Attribute>> System ID of the object being referenced.	[ Is static True. Containment is Not Specified. ]
 linkedObjectTable : CharacterString Public	
<b>linkedObjectTable:</b> <<Attribute>> Database table in which the object being referenced is stored.	[ Is static True. Containment is Not Specified. ]
 linkedWROID : CharacterString Public	
<b>linkedFileID:</b> <<Attribute>> System ID of the file being referenced.	[ Is static True. Containment is Not Specified. ]
ASSOCIATIONS	
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_WronglyRecordedObject «FeatureType»	Target: Public (Class) MUDDIObjct «FeatureType»
 Association (direction: Source -> Destination) wronglyRecordedObject	
Source: Public (Class) Relationship_WronglyRecordedObject	Target: Public (Class) WronglyRecordedObject

ASSOCIATIONS	
«FeatureType»	«FeatureType»

## 1.7.9 UnidentifiedBuriedObject

Class «FeatureType» in package 'NHDM-NUARUserCreatedData'

### UnidentifiedBuriedObject:






<<FeatureType>>

From PAS256:2017:

"[A] buried asset at a given location, which is not recorded on any plans supplied by undertaker, local highway or roads authority or any other asset owner".

A discovered object whose function, nature and/or ownership is unknown at the time of discovery.

Created on 23/08/2021. Last modified 31/01/2023

ATTRIBUTES	
 colourDescription : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>colourDescription:</b> <b>Optional</b> A description of the colour of, and any markings on, the object [ Is static True. Containment is Not Specified. ]	
 componentTypeDescription : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>componentTypeDescription:</b> <b>Optional</b> A description of the discovered object. [ Is static True. Containment is Not Specified. ]	
 estimatedDepth : DepthType Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>estimatedDepth:</b> <b>Optional</b> An estimate of the depth below the surface of the discovered object in <b>measurementUnits</b> . [ Is static True. Containment is Not Specified. ]	
 estimatedUtilityType : UtilityTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>estimatedUtilityType:</b> <b>Optional</b> An estimate of the utility type of the discovered object if applicable. The values for this attribute are defined in the <UtilityTypeValue> codelist. [ Is static True. Containment is Not Specified. ]	
 materialDescription : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )  <b>materialDescription:</b> <b>Optional</b> A description of the material of which the discovered object is primarily constructed. [ Is static True. Containment is Not Specified. ]	

## 1.7.10 UserCreatedFeatureLifecycle\_history

Class «FeatureType» in package 'NHDM-NUARUserCreatedData'





Created on 31/01/2023. Last modified 31/01/2023



ATTRIBUTES	
 <b>dateOfChange</b> : DateTime Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>description</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>featureSystemID</b> : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 <b>featureType</b> : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 <b>newLifecycleStatus</b> : LifecycleStatusValue Public	[ Is static True. Containment is Not Specified. ]
 <b>newVersion</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>originalLifecycleStatus</b> : LifecycleStatusValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>originalVersion</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>supersededByFeatureType</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 <b>supersededByID</b> : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]

## 1.7.11 UtilitySurvey

Class «FeatureType» in package 'NHDM-NUARUserCreatedData'

Created on 17/06/2024. Last modified 17/06/2024




ATTRIBUTES	
 commissionedByOrganisationID : CharacterString Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]
 completedByOrganisationID : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 pas128Survey : Boolean Public = false	[ Is static True. Containment is Not Specified. ]
 surveyType : UtilitySurveyTypeValue Public Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )	[ Is static True. Containment is Not Specified. ]


ASSOCIATIONS	
 Association (direction: Source -> Destination) utilitySurvey Source: Public (Class) UtilitySurveySite «FeatureType»	Target: Public (Class) UtilitySurvey «FeatureType»
 Association (direction: Source -> Destination) utilitySurvey Source: Public (Class) Relationship_ObjectToSurvey «FeatureType»	Target: Public (Class) UtilitySurvey «FeatureType»

## 1.7.12 UtilitySurveySite

Class «FeatureType» in package 'NHDM-NUARUserCreatedData'

Created on 17/06/2024. Last modified 17/06/2024

ATTRIBUTES	
 pas128Survey : Boolean Public = false	[ Is static True. Containment is Not Specified. ]
 surveyType : DataProvenanceValue Public	[ Is static True. Containment is Not Specified. ]
 utilitySurveyID : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ASSOCIATIONS	
 Association (direction: Source -> Destination) utilitySurvey Source: Public (Class) UtilitySurveySite «FeatureType»	Target: Public (Class) UtilitySurvey «FeatureType»

## 1.7.13 WronglyRecordedObject

Class «FeatureType» in package 'NHDM-NUARUserCreatedData'




### WronglyRecordedObject:

<<FeatureType>>

From PAS256:2017:

"[An] object recorded in the plans supplied by the asset owner that does not match the location or description of the asset. NOTE WROs could be, for example, pipes or cables for which the depth, location or materials differ from the information provided in the supplied plans."

Created on 23/08/2021. Last modified 31/01/2023

ASSOCIATIONS	
 Association (direction: Source -> Destination) wronglyRecordedObject	
Source: Public (Class) Relationship_WronglyRecordedObject «FeatureType»	Target: Public (Class) WronglyRecordedObject «FeatureType»
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) WronglyRecordedObject «FeatureType»
 Association (direction: Source -> Destination) linkedObject	
Source: Public (Class) Relationship_LinkedFile «FeatureType»	Target: Public (Class) WronglyRecordedObject «FeatureType»

## 1.8 NHDM-NUARVersion

Package «ApplicationSchema» in package 'NHDM-Logical'

NHDM-NUARVersion

Version 2.1.2 Published

Created on 11/03/2022. Last modified 28/07/2024

### 1.8.1 NUAR Harmonised Data Model - Logical - NUARVersion diagram

GML diagram in package 'NHDM-NUARVersion'

NUAR Harmonised Data Model - Logical - NUARVersion

Version 2.1.2

Created on 11/03/2022. Last modified 28/07/2024

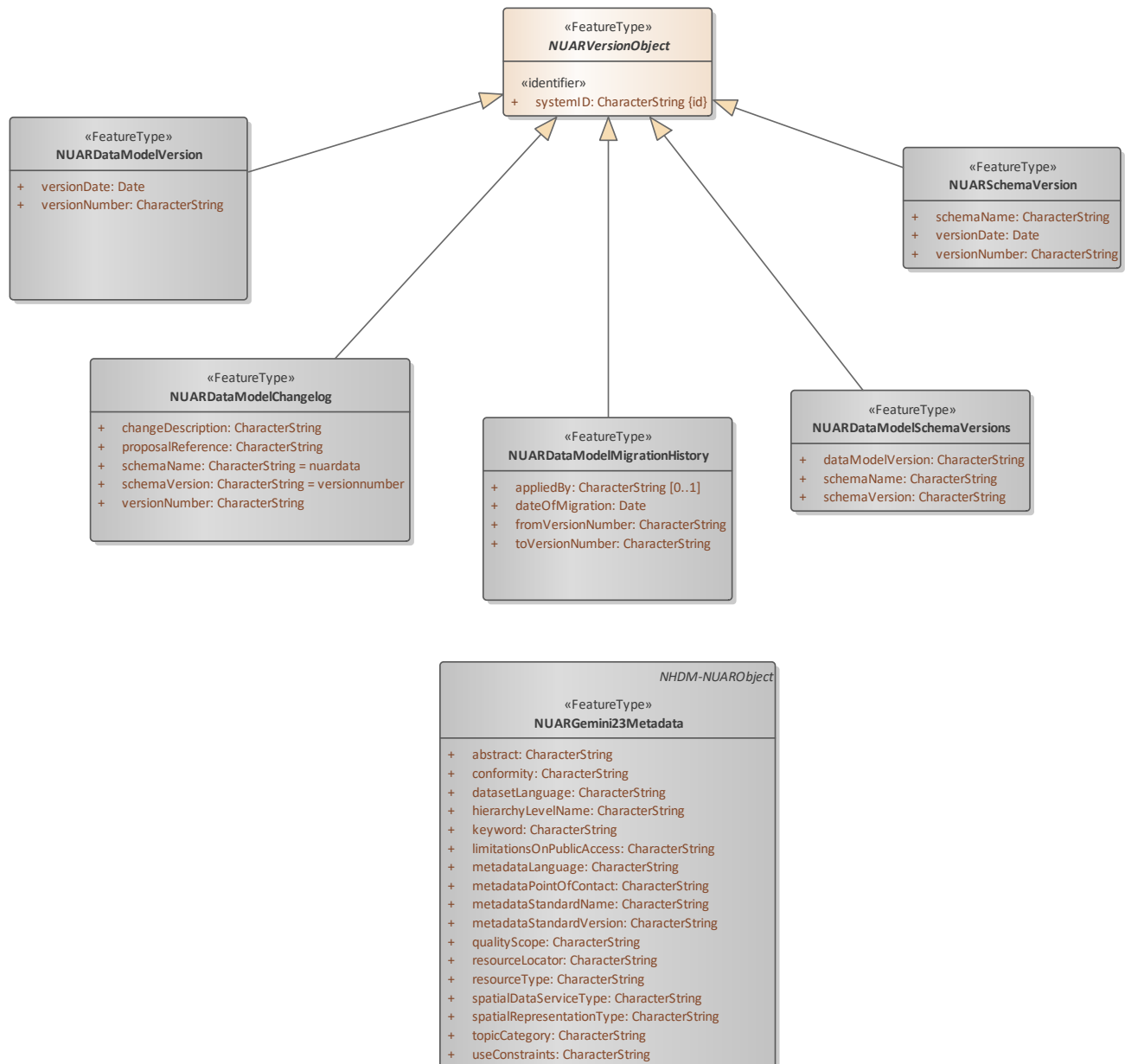


Figure 26: NUAR Harmonised Data Model - Logical - NUARVersion

## 1.8.2 NUARDataModelChangelog

Class «FeatureType» in package 'NHDM-NUARVersion'


### NUARDataModelChangelog:

<<FeatureType>>

A record of changes that are part of the specified NUAR Data Model version

Created on 11/03/2022. Last modified 23/03/2024

#### ATTRIBUTES





 changeDescription : CharacterString Public

#### changeDescription:

##### Mandatory

A textual description of a change which has contributed to this version of the NUAR Data Model.

[ Is static True. Containment is Not Specified. ]

ATTRIBUTES
<p> <b>proposalReference</b> : <code>CharacterString</code> <code>Public</code></p> <p><b>proposalReference:</b>  <b>Mandatory</b>  The reference of the Data Model Proposal which describes the change. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>schemaName</b> : <code>CharacterString</code> <code>Public</code> = nuardata</p> <p><b>schemaName:</b>  <b>Mandatory</b>  <b>Default='nuardata'</b>  The name of the schema in the NUAR Data Model to which the change applies. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>schemaVersion</b> : <code>CharacterString</code> <code>Public</code> = versionnumber</p> <p><b>schemaVersion:</b>  <b>Mandatory</b>  The version of the schema in the NUAR Data Model to which the change applies. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>versionNumber</b> : <code>CharacterString</code> <code>Public</code></p> <p><b>versionNumber:</b>  <b>Mandatory</b>  The version number of the NUAR Data Model version. [ Is static True. Containment is Not Specified. ]</p>

### 1.8.3 NUARDataModelMigrationHistory




Class «FeatureType» in package 'NHDM-NUARVersion'


#### NUARDataModelMigrationHistory:

<<FeatureType>>

A record of migrations of a given encoding of the NUAR Data Model from one version to another.

Created on 11/03/2022. Last modified 23/03/2024

ATTRIBUTES
<p> <b>appliedBy</b> : <code>CharacterString</code> <code>Public</code>  Multiplicity: ( [0..1], Allow duplicates: 0, Is ordered: False )</p> <p><b>appliedBy:</b>  <b>Optional</b>  Name of the person who performed the migration. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>dateOfMigration</b> : <code>Date</code> <code>Public</code></p> <p><b>dateOfMigration:</b>  <b>Mandatory</b>  The date and time at which the migration was completed. [ Is static True. Containment is Not Specified. ]</p>
<p> <b>fromVersionNumber</b> : <code>CharacterString</code> <code>Public</code></p>

ATTRIBUTES	
<b>fromVersionNumber:</b> <b>Mandatory</b> The version number of the NUAR Data Model which was migrated from.	[ Is static True. Containment is Not Specified. ]
 toVersionNumber : CharacterString Public  <b>toVersionNumber:</b> <b>Mandatory</b> The version number of the NUAR Data Model which was migrated to.	[ Is static True. Containment is Not Specified. ]

## 1.8.4 NUARDataModelSchemaVersions




Class «FeatureType» in package 'NHDM-NUARVersion'

**NUARDataModelSchemaVersions:**

<<FeatureType>>

Relationship between individual schema versions and the version of the overall NUAR Data Model.

Created on 31/01/2023. Last modified 23/03/2024

ATTRIBUTES	
 dataModelVersion : CharacterString Public  <b>dataModelVersion:</b> <b>Mandatory</b> The version number of the overall NUAR Data Model version.	[ Is static True. Containment is Not Specified. ]
 schemaName : CharacterString Public  <b>schemaName:</b> <b>Mandatory</b> The name of the schema in the NUAR Data Model.	[ Is static True. Containment is Not Specified. ]
 schemaVersion : CharacterString Public  <b>schemaVersion:</b> <b>Mandatory</b> The version number of the schema version.	[ Is static True. Containment is Not Specified. ]

## 1.8.5 NUARDataModelVersion

Class «FeatureType» in package 'NHDM-NUARVersion'

**NUARDataModelVersion:**



<<FeatureType>>

Version information about the overall NUAR Data Model.

Created on 11/03/2022. Last modified 23/03/2024

ATTRIBUTES
------------



ATTRIBUTES	
 versionDate : Date Public  <b>versionDate:</b> <b>Mandatory</b> The date of the NUAR Data Model version.	[ Is static True. Containment is Not Specified. ]
 versionNumber : CharacterString Public  <b>versionNumber:</b> <b>Mandatory</b> The version number of the NUAR Data Model version.  Properties: length = 10	[ Is static True. Containment is Not Specified. ]

## 1.8.6 NUARGemini23Metadata









Class «FeatureType» in package 'NHDM-NUARVersion'

**NUARGemini23Metadata:**

<<FeatureType>

Feature Type for storing UK GEMINI-compliant metadata for the NUAR service.

Created on 06/02/2024. Last modified 23/03/2024

ATTRIBUTES	
 abstract : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 conformity : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 datasetLanguage : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 hierarchyLevelName : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 keyword : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 limitationsOnPublicAccess : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 metadataLanguage : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 metadataPointOfContact : CharacterString Public	[ Is static True. Containment is Not Specified. ]

ATTRIBUTES	
 metadataStandardName : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 metadataStandardVersion : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 qualityScope : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 resourceLocator : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 resourceType : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 spatialDataServiceType : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 spatialRepresentationType : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 topicCategory : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 useConstraints : CharacterString Public	[ Is static True. Containment is Not Specified. ]

## 1.8.7 NUARSchemaVersion




Class «FeatureType» in package 'NHDM-NUARVersion'

### NUARSchemaVersion:

<<FeatureType>>

Version information about a specific schema in the NUAR Data Model.

Created on 31/01/2023. Last modified 23/03/2024

ATTRIBUTES	
 schemaName : CharacterString Public	[ Is static True. Containment is Not Specified. ]
 versionDate : Date Public  <b>versionDate:</b> <b>Mandatory</b> The date of the schema version.	[ Is static True. Containment is Not Specified. ]
 versionNumber : CharacterString Public  <b>versionNumber:</b> <b>Mandatory</b>	

**ATTRIBUTES**

The version number of the schema version.


[ Is static True. Containment is Not Specified. ]

**ABSTRACT****1.8.8 NUARVersionObject**

*Class «FeatureType» in package 'NHDM-NUARVersion'*

Created on 31/01/2023. Last modified 31/01/2023

**ATTRIBUTES**

 systemID : CharacterString Public

Properties:

size = 38

[ Stereotype is «identifier». Is static True. Containment is Not Specified. ]