



The CARARE metadata schema, v.2.0

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Revision History

Rev.	Date	Author	Org.	Description
1.0		Christos Papatheodorou, Phil Carlisle, Christian Ertmann-Christiansen, Kate Fernie	CARARE	CARARE metadata schema Version1.0
2.0	21/2/13	K Fernie et al	MDR	Final draft of version 2.0 of the CARARE metadata schema

1. Introduction

Version 2.0 of the CARARE metadata schema following the experience gained as a result of aggregating metadata for Europeana from the 24 CARARE content providers and taking into account the requirements of the 3D ICONS project.

Version 1.0 of the CARARE schema built on existing standards (MIDAS Heritage, CIDOC CRM, LIDO etc) and was the work of the members of the CARARE metadata working group, the DCU metadata team and the English Heritage Data Standards Unit including: Christos Papatheodorou, Phil Carlisle, Christian Ertmann-Christiansen, Kate Fernie, Maria Emilia Masci, Oliver Mamo, Börje Justrell, Sven Ole Clemens, Vassilis Tzouvaras, Dimitris Gavrilis, Stavros Angelis, Constantia Kakali, Giannis Tsakonas, Panos Constantopoulos, Costis Dallas, Sólborg Una Pálsdóttir, Effie Patsatzi, Lena Inger Larsen, Daniel Pletinckx, Nasos Drosopoulos, Vykintas Vaitkevičius, Rimvydas Laužikas, Phil Carlisle, Gillian Grayson and Stephen Stead.

This version of the schema takes into account the experience gained from mapping more than 40 datasets from 20 different countries to version 1.0 of the CARARE metadata schema during the CARARE project, and of transforming CARARE metadata to EDM for supply to Europeana. This experience suggested areas where the schema might be simplified. The main changes in version 2.0 are as follows:

- The scope of the Heritage Asset has been broadened to include printed materials, archives and born-digital objects relating to the archaeological and architectural heritage.
- Digital Resource has been simplified to focus on the type, format and location of the online resource.
- Heritage Asset becomes mandatory; there must be at least one in each CARARE object. It remains mandatory to include at least one digital resource in each CARARE object.
- The record information has been simplified.
- The rights statements have been simplified and metadata rights clarified.
- The references section of the Heritage Asset has been simplified.
- Provenance has been added to Heritage Asset.
- Spatial information has been updated.
- Elements for types of relations from heritage assets, digital resources and activities have been specified for clarity.

In addition to these changes, to meet the needs of the 3D ICONS project to enable information to be captured about the provenance of 3D objects. The following changes are included:

- Activities have been extended to allow for the recording of sub-ordinate events that take place during a larger campaign.
- New elements for types of relations have been added based on CRM-DIG.

2. Outline of the CARARE schema

It is important to note that this is a harvesting schema intended for delivering metadata to the CARARE service environment of an organisation's online collections, monument inventory database and digital objects. It does not support activities such as monument management and protection. The strength of the schema lies with its ability to support the full range of information about monuments, building, landscape areas, artefacts and born-digital objects, related events and their representations.

The schema is an application profile based on MIDAS Heritage and the CIDOC CRM. MIDAS Heritage is a detailed standard intended for the full documentation of all aspects of heritage management not all of which are relevant to the CARARE service environment. The CARARE schema's focus is on the detailed description of heritage assets, events in which the asset has been involved and digital resources which are available online and their provenance. It follows the structure of MIDAS Heritage enhanced by the expressiveness of LIDO and EDM.

2.1 Wrappers

Conceptually the CARARE record is focussed on a heritage asset and its relations to digital resources, activities and to collection information. The top-level elements in a CARARE record are:

CARARE Wrap – The CARARE schema wrap, it wraps one or many CARARE records.

CARARE – The CARARE start element. It wraps the Heritage Asset with the other information resources (Collection information, Digital Resource and Activity):

Heritage asset – holds the metadata for a monument, building or cultural object including printed materials and born-digital objects, including descriptive and administrative metadata. One.

Digital resource – holds the metadata about a digital resource including its online location. One or more.

Activity – holds the metadata about an event or activity. Zero or more.

Collection information – holds the collection-level description. Zero or one

Heritage assets are “first-class” citizens in the CARARE schema and it is mandatory for each CARARE record to include one heritage asset and at least one digital resource – in this way the schema provides for the description of cultural objects including historical images whose exact location is no longer certain and born-digital cultural objects.

We recommend the inclusion of collection information in CARARE records to provide the context for the collection.

The schema also allows for the option of providing information about Activities.

3. CARARE object record

3.1 CARARE

This is the start element for the CARARE object record. It contains a unique identifier for the record and wraps the four main themes:

- Collection information
- Heritage asset identification
- Digital resource
- Activity

3.2 Collection information

The following elements provide a collection level description of the resources being harvested

- ID – a unique identifier for the collection.
- Title – the title of the collection. The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.
- Source – organisation that is the source of the collection
- Contacts – for the collection
- Rights – associated with the collection as a whole
- Language – of the metadata. Specifies the default language of the records in the collection; deviations in particular records are specified in the record metadata, and deviations in particular elements are specified using the xml:lang attribute where allowed. Specified (like the xml:lang attribute) using ISO 639-1:2002, i.e. standard two letter language codes (en, fr, etc.).
- Statement – free text. The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.
- Creation – information about how the resources being harvested were collected includes:
 - Created on – when the collection was created
 - Query - The query used to extract the data.
- Keywords – for the collection. The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. Use of a controlled vocabulary such as Getty Arts and Architecture Thesaurus is recommended, and the vocabulary used may be indicated using an attribute.
- Coverage – of the collection
 - Temporal – general temporal coverage of the collection
 - Spatial – general spatial coverage of the collection, e.g. the country covered.
- DC:Relation

3.3 Heritage Asset Identification Set

The CARARE information set for heritage assets is based on the MIDAS Heritage standard, however the elements are compatible with the POLIS DTD and the CIDOC Core Data Index for Archaeological Sites.

The scope of this information set includes archaeological monuments, historic buildings, industrial monuments, archaeological landscape areas, shipwreck, artefacts and ecofacts, as well as books, printed materials, printed maps, drawings, photographs, films and born-digital 3D models which relate to the archaeological and architectural heritage. The ability to create relations between heritage asset records allows the relationships between individual monuments that form parts of a larger complex to be expressed, for example the Parthenon, Propylaea and the Erechtheum are part of the Acropolis of Athens.

Please note that global types are defined in section 11. The heritage asset information set includes:

Record information (source = MIDAS) (global) – The ID, the language of the metadata, creation information and other metadata describing the record. The ID element of this information block holds the ID assigned by the content provider and is used to add a unique ID for the CARARE object. .Mandatory, see section 8 below.

Appellation (source = MIDAS) (global) – This is the name or title of the heritage asset and the identifier (ID) and may be repeated if, for example, a monument is known by more than one name or has more than one ID number, If the heritage asset has a name in an alternate language the XML:lang attribute should be used. The preferred/alternate attribute may be used to indicate which name is preferred.

Description (source = MIDAS) (global) – of the features of the archaeological monument, historic building, industrial monument, archaeological landscape area, shipwreck, artefact or ecofact, or the subject of the book, printed material, printed map, drawing, photograph, films and born-digital 3D models which relate to the archaeological and architectural heritage. This element may be repeated, for example in cases where there is a both a short summary and a full description.

General type – This is a broad classification of the general type of the heritage asset and is intended to enable monuments, buildings and landscape areas to be distinguished from artefacts, text documents (printed materials, books, articles, etc), images (photographs, drawings etc), audio recordings, movies reference and 3D models. A fixed controlled vocabulary is proposed for use in which the term “Monument” includes archaeological monuments, historic buildings, industrial monuments, archaeological landscape areas and shipwrecks. The vocabulary is as follows:

- Monument
- Artefact
- Text
- Image
- Sound
- Movie
- 3D

Actors (source = MIDAS) (global) – the actors involved with this monument, for example famous inhabitants, the architect etc. May be repeated.

Designations (source = MIDAS);

This is information about any designations for a monument or building which provide it with protection in law. There may be more than one designation.

- Protection type – the type of designation or protection.
- Grade – the grade or level of protection.
- Date from – the calendar date from which the protection came into force.
- Date to – the calendar date until which the monument is protected
- Display date – this is a text element to allow for a descriptive date, e.g. '1950s'.

Conditions (source = MIDAS);

This is information about the condition of a monument or building. The element is repeatable.

- Condition – the observed condition (e.g. good, fair, bad, poor, part destroyed, under restoration.)
- Condition Assessment - A detailed assessment of the condition of a Heritage Asset and any treatment required and an estimation of the percentage of the monument affected.
- Condition Date – the date when the assessment of condition was made. Free text to allow for a descriptive date, e.g. '1950s'.
- Was Present At – relation to an associated event/activity at which the assessment was made

Provenance (source = DCMI Terms) – A free-text statement of any changes in ownership and custody of the resource since its creation that are significant for its authenticity, integrity, and interpretation.

Characters (source = MIDAS);

This is a set of index information to describe the character of the monument

- **Heritage asset type** (source = MIDAS) – classification of the monument, building, landscape feature, artefact or ecofact primarily with respect to its function or use, e.g. house. Use of a controlled vocabulary is recommended, and the vocabulary used may be indicated using an attribute. No particular common vocabulary is recommended for use.
 - Term
 - Namespace – this is the name/location of the controlled vocabulary from which the term is taken.
- **Temporal** (source = MIDAS) (Global) (see section 11)
- **Materials** (source = MIDAS) – the basic materials of which a heritage asset is composed, e.g. brick, stone, tile, paper etc. Use of a controlled vocabulary is recommended, and the vocabulary used may be indicated using an attribute. No particular common vocabulary is recommended for use.
- **Inscriptions** (source = MIDAS) – text inscribed on a monument or building, if any. The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred. The type of inscription may be indicated using an attribute. Use of a controlled vocabulary to indicate the type of inscription is recommended, and the vocabulary used may be indicated using an attribute. No particular common vocabulary is recommended for use.
- **Dimensions** (source = MIDAS, LIDO)
 - **Extent** – this is to note the part of the heritage asset being measured, e.g. Base.

- **Measurement type** – e.g. height, length, width, depth, shape (e.g. oval)
- **Units** – e.g. metres, centimetres
- **Scale**
- **Value** - e.g. 150. The valuetype attribute allows the accuracy of the measurement to be indicated (exact, approximate)
- **Craft** (source = MIDAS) – this is a set of information to describe shipwrecks if any
 - Placeofregistration – the name of the place where the ship was registered
 - Nationality – of the ship
 - Constructionmethod – the method by which the ship was constructed, e.g. clinker,
 - Propulsion – the means of propulsion of the ship, e.g. steam, sail etc.
 - Lastjourneydetails – Details about the last journey of the ship
 - Departure – Port of departure
 - Destination – Port of destination
 - Cargo – the cargo the ship was carrying, may be repeated.
 - Mannerofloss – a description of how the ship was lost, e.g. ‘ran aground’.
 - Dateofloss – the date when the ship was lost. Free text.

Spatial (source = MIDAS) (Global) (see section 11)

This is information about the place at which the heritage asset is located, included named places, postal address, the map coordinates and geometry of the heritage asset.

Repository location (source = LIDO) – identification of the institution with custody of the artefact and possibly the current location.

Publication statement (Global) (see section 11)

Rights (source = DC) – a statement of any rights associated with the heritage asset.

References – these are sources of information about the heritage asset in publications and archival sources (for example, bibliographic references etc.). Do not include the digital objects (image, text, video, audio, 3D model, etc.) which your organisation is making accessible to Europeana – these should be described as Digital Resources, not References. Source = MIDAS + DCMI Terms. The information includes:

- **Appellation** – the ID and name given to the information source.
- **Actors** (source = MIDAS) (Global) – (creator, author, contributor, editor, etc.)
- **Type** (archive, file, record, book, chapter, article etc.) Use of a controlled vocabulary is recommended, and the vocabulary used may be indicated using an attribute. No particular common vocabulary is recommended for use.
- **Rights** (source = MIDAS)
- **Publication statement** (Global) (see section 11)
- **Note** (source = MIDAS) (Global)
- **Link (Source = LIDO)** – this is the URL where users can find the reference online

Has Representation – the relation between a heritage asset and a digital resource in which it is represented. Give the id number of the target record or a URI.

Is Successor Of – the relation between a heritage asset and an earlier one, e.g. a church is successor of an earlier church on the same site. Give the id number of the target record or a URI.

Was Present At – this is the relation between a heritage asset and an Activity that it was present at, e.g. a castle was present at a siege, a cross was present at a digitization event. Give the id number of the target record or a URI.

Has Part – used for heritage assets that incorporate other assets, e.g. a landscape monument has parts (is made up of) smaller monuments. Give the id number of the target record or a URI.

Is Part Of – this is the relation between a heritage asset and the larger heritage asset of which it is part, e.g. a gatehouse is part of a fortification. Give the id number of the target record or a URI.

Is Replica Of – this is the relation between a replica and the original heritage asset, for example a scale model and the original, or a 3D reconstruction and the original building. Give the id number of the target record or a URI.

Was Digitized By – this is the relation between a Heritage Asset and an Activity in which it was digitized. (It is a specialization of Was Present At). Give the id number of the target record or a URI.

DC:Relation – this is for general relations from the Heritage Asset. Give the id number of the target record or a URI.

3.4 Digital Resource

These are digital resources (image, text, video, audio, 3D model) that are being made accessible to the service environment (e.g. CARARE, Europeana). Use this to describe those digital objects which are available online for end-users. Source = Europeana Data Model + LIDO + MIDAS + DCMI Terms.

The information set includes:

Record information (source = MIDAS) (Global) - The ID, language, creation information and other metadata describing the record. The ID element of this information block holds the ID assigned by the content provider, cf. section 8.

Appellation – the ID and the name given to the information source (see section 11).

Description (source = MIDAS) (Global) – The description of the resource, e.g. describe the view of the monument.

Note (source = MIDAS) (Global)

Actors – The actors involved in the creation of a digital resource

Type (source = DCMI Terms) – The nature or genre of the resource. Use of the DCMI controlled vocabulary is recommended, and the vocabulary used may be indicated using an attribute.

Format (source = DCMI Terms) – the file format of the resource. Recommended best practice is to use a controlled vocabulary such as the list of Internet Media Types (MIME).

Format Details (source = DCMI Terms) – Additional information about the file or its production that could be of use in selecting an appropriate viewer for the resource, such as specific codecs used.

Extent (source = DCMI Terms) – the size or extent of the resource, including the unit of measurement.

Publication statement (see section 11)

Created (source = DCMI Terms) – this is the date when the digital resource was created

Language (source = DC) – use for the language of the resource, e.g. the language sub-titles or a voice-over in a movie or a Virtual Reality model of a monument. Specified (like the xml:lang attribute) using ISO 639-1:2002, i.e. standard two letter language codes (en, fr, etc.). Mandatory for text-type resources.

Link (source = LIDO) – the URL of the resource. A reference to the digital object on the content provider's web site in the best available resolution/quality (i.e. a link to the resource as a text, image, sound, or video file, **not** to the webpage that contains it).

Object (source = Europeana) – **A URL to a thumbnail.** The data given here will allow the automatic generation of a thumbnail by Europeana for its functionality.

IsShownAt (source = ESE v3.3) – A URL to the digital object on the content provider's website in its full information context (i.e. a link to the webpage that contains the digital object and contextual information).

Rights (source = MIDAS) – the rights associated with the digital object itself (copyright, access rights, reproduction rights).

Is Representation Of – this is the relation between a digital resource and the heritage asset that it represents, e.g. a digital image is a representation of a monument. Give the id number of the target record or a URI.

Has Part – this is the relation between a digital resource and other digital resources which it contains, e.g. a 3D model may be related to some text documents and sound files. There is no ordered sequence between the parts. Give the id number of the target record or a URI.

Is Part of – this is the relation between a digital resource and the digital resources of which it forms part, e.g. an image is part of a book. There is no ordered sequence between the parts. Give the id number of the target record or a URI.

Next In Sequence – this is the relation between a digital resource and the next digital resource in the sequence, e.g. the pages in a book or an ordered sequence of 3D models showing the change of a monument over time. Give the id number of the target record or a URI.

Is Previous in Sequence – this is the relation between a digital resource and the previous digital resource in the sequence, e.g. the pages in a book or an ordered sequence of 3D models showing the change of a monument over time. Give the id number of the target record or a URI.

Is Derivative Of – this is the relation between a Digital Resource and the digital resource which it is a derivative (or version) of. Give the id number of the target record or a URI.

Has Derivative – this is the relation between a Digital Resource and a derivative (or version) of the resource. Give the id number of the target record or a URI.

Created Derivative – this is the relation which defines the reuse of a Digital Resource to create derivatives, e.g. during the different processing phases of digitization. It is a specialisation of Is Derivative Of. Give the id number of the target record or a URI.

DC:Relation – this is for general relations from the Digital Resource. Give the id number of the target record or a URI.

3.3 Activity

This is information about the events or activities that the monument has taken part in, for example: Field investigation; Research and analysis; Creation; Change in use; Historical events, etc. Source = MIDAS + POLIS DTD + CIDOC CRM-DIG.

The information includes:

Record information (source = MIDAS) – The ID, language, creation information and other metadata describing the record. The ID element of this information block holds the ID assigned by the content provider, cf. section 8.

Appellation (source = MIDAS) (global) – This is the name and ID number of the event.

Description (source = MIDAS) (global) – of the event or activity that took place. Free-text

Had General Purpose (source = CIDOC CRM) –this is a free text description of the general goal or purpose of an Activity. For example this could include practicing, preparing, monitoring, researching, designing, testing etc.

Event type (source = MIDAS – general classification of the type of event or activity which took place, e.g. survey, archaeological excavation, digitization, rebuilding. Use of a controlled vocabulary is recommended. (Not repeating)

- Term
- Namespace – this is the name/location of the controlled vocabulary from which the term is taken.

Actors (source = MIDAS) (global) – the people or organisations involved in this event, may be repeated.

Temporal (source = MIDAS) (Global) – the date or time span of the event.

Spatial (source = MIDAS) (Global) – the location or area covered by the event.

Consists of (source = CRM-DIG) this is a repeating group of elements which allows the specific activity (or activities) that took place during the overall Event to be described.

Had Specific Purpose (source = CIDOC CRM) - a free text note describing the specific goal or purpose of this activity. For example, carrying out 3D data acquisition, restoration of a part of a building, completing a survey, constructing a building, etc.

Start date – the start date of the specific activity

End date – the end date of the specific activity

Methods (source = LIDO) – the methods used in this specific activity, e.g. open area excavation, sample survey, augering, boring, stratigraphic, restoration, conservation, re-pointing, photogrammetric survey etc. Use of a controlled vocabulary is recommended.

Techniques – the techniques used in this specific activity. Use of a controlled vocabulary is recommended.

Materials (source = LIDO) – the materials used during the event method. Use of a controlled vocabulary is recommended.

Equipment– the equipment used during the event method.

Assessments (source = MIDAS) – assessments made of the monument during the event, e.g. of the condition of the monument. Use of a controlled vocabulary is recommended.

- Term
- Namespace – this is the name/location of the controlled vocabulary from which the term is taken.

Occurred At – can be used to associate an Activity to the time span that overlaps with the occurrence of that activity. Give the id number of the target record or a URI.

Happened At – can be used to relate an event to the place where it happened. Give the id number of the target record or a URI.

Was Present At – can be used to relate an Activity to the Actors who were present. Give the id number of the target record or a URI.

Has Part – this is the relation to an Activity and shorter Activity which forms part of the overall event, e.g. a war consists of a series of battles, a landscape survey consists of a series of geophysical surveys and sample excavations. Give the id number of the target record or a URI. Give the id number of the target record or a URI.

Is Part of – this is the relation between an Activity and the general activity of which it forms a part of, e.g. a battle is part of a war. Give the id number of the target record or a URI.

Has Created (source = CRD Dig) this is the relation between an Activity and a digital resource or digital file that it created; includes raw data files, processed data files and final models published online. Give the id of the target record, the file-name or a URI.

DC:Relation – this is for general relations from the Activity, e.g. to publications. Give the id number of the target record or a URI.

4. Global types

The following types are used globally across the CARARE schema to define its elements.

4.1 Record information

Basic administrative information about the record:

- ID – i.e. the local ID number in the content providers' information system; it is mandatory to provide an ID which must be unique within the collection; but the id may follow any schema.
- Source – of the record (the name of the organisation that maintains the record)
- Country – in which the head office of the organisation that maintains the record is based.
- Creation – when created and who by;
 - Contacts
 - Date
- Update – the date of the last update to the record and who by;
 - Contacts
 - Date
- Language (of the metadata record). Specifies the default language of the record; deviations in particular elements are specified using the xml:lang attribute where allowed. Specified (like the xml:lang attribute) using ISO 639-1:2002, i.e. standard two letter language codes (en, fr, etc.).
- Metadata Rights – statement about any rights to the metadata, include a link to a licence online if appropriate.

4.2 Appellation

- Name – this is the name of the entity. The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.
- ID – an identifier of an object. An attribute type should be accompany this sub-element denoting the type of the identifier (URI, ISBN, etc.) The element may be repeated.

4.3 Rights

Information about the rights associated with the object, metadata and the digital surrogate being harvested into the service environment based on MIDAS Heritage. The information includes:

- Copyright credit line – a statement about the rights holder and rights dates
- Access rights – a statement about the access rights to the content.
- Reproduction rights – a statement about the reproduction rights including contact information
- License – a URI indicating a license or conditions for the use of the object or data, e.g. this could be a page on the content providers website which includes information about copyright, access rights and reproduction rights or a link to a Creative

Commons license¹ or the public domain mark². Use as a supplement to the information above. It is always recommended that the Copyright elements are given when known.

- Europeana Rights – one of the 12 rights statements used by Europeana in its portal. See: <http://pro.europeana.eu/web/guest/available-rights-statements>. Required for content being provided to Europeana.

4.4 Temporal

Information about the date and/or period of an entity.

- Time span
 - start date – the earliest date in the range (literal)
 - end date – the latest date in the range (literal)
 - Date range qualifier – the nature of the time span given (e.g. throughout, at some time during, etc.) Use of a controlled vocabulary is recommended.
- Period name – the name given to the period in history when something occurred. The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.
- Display date – a free text field used to display the date or period for users (e.g. early 19th century, 1950s). The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.
- Scientific Date – date according to scientific dating methods, e.g. ‘1250 bp +/-30 PBN-1675’, recorded precisely as received from the specialist.
- Scientific Date Method – e.g. ‘radiocarbon dating’. Use of a controlled vocabulary is recommended, and the vocabulary used may be indicated using an attribute. No particular common vocabulary is recommended for use.

4.5 Spatial

(source = MIDAS). Information about locations or positions in space.

- Location set
 - **Named location** – the name of a place or location which is relevant to the entity being described, for example ‘Lake Windermere’.
 - The element may be repeated using the XML:lang attribute if the element value is available in alternate languages.
 - A preferred/alternate attribute may be used to indicate which value is preferred.
 - Use of a controlled vocabulary such as <http://www.geonames.org/> is recommended, and the vocabulary used may be indicated using an attribute.
 - **Address** – the postal address.
 - **Geopolitical area** – the name of an administrative region which does not form part of the address, for example Scotland, England, Tuscany etc. May also be used for a historical geopolitical area, or an administrative unit (e.g. as defined in the INSPIRE directive).

¹ <http://creativecommons.org/about/licenses/>

² <http://creativecommons.org/publicdomain/mark/1.0/>

- Use of a controlled vocabulary such as <http://www.geonames.org/> is recommended, and the vocabulary used may be indicated using an attribute.
 - The type of the geopolitical area may be indicated using an attribute, for example Country, District, Region, City.
 - **Cadastral reference**
 - **Historical name.** The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.
- **Geometry**
 - **Spatial reference system** – Use of a controlled vocabulary is recommended, and the vocabulary used may be indicated using an attribute (e.g. WGS84). The ESPG spatial coordinate reference is recommended for use. (Mandatory where coordinates are provided)
 - **Quickpoint** (this is the centre point)
 - X (according to the spatial coordinate system in use)
 - Y (according to the spatial coordinate system in use)
 - Z (height)
 - Accuracy – free-text, the accuracy of the point in metres.
 - **Bounding box**
 - Min X (according to the spatial coordinate system in use)
 - Min Y (according to the spatial coordinate system in use)
 - Max X (according to the spatial coordinate system in use)
 - Max Y (according to the spatial coordinate system in use)
 - Min Z (height)
 - Max Z (height)
 - Accuracy
 - **Other geometries** (optional)
 - Type (Point, Line, Polygon) (repeating group to allow a series of points to be recorded)
 - X (according to the spatial coordinate system in use)
 - Y (according to the spatial coordinate system in use)
 - Z (height)
 - Accuracy – free-text, the accuracy of the point in metres.
 - **Entity:** GML, Well-known text (WKT).
 - **Stored precision,** delivery precision (the precision of a coordinate as stored in the system, and as delivered to users).
 - **Area:** units
- **Representations** – how a feature is represented on a map
- **3D Cartesian coordinates** – use for the local coordinates within a 3D model,
 - **Cartesian coordinate system** (this is the local coordinate system in use within the particular software)
 - **Viewpoints** – a viewpoint within the 3D model, i.e. where the camera is positioned in the digitisation process
 - X
 - Y
 - Z

4.6 Actors

(source = MIDAS + elements from LIDO).

- ID
- Name (the name of the person or organisation)
- ActorType (source = LIDO – indicates whether the actor is an individual, a group of individuals or an organisation.
- Roles – the roles of the actor (creator, custody, repository, curator, architect, sculptor, photographer, compiler, etc.) Use of a controlled vocabulary such as Getty Arts and Architecture thesaurus is recommended, and the vocabulary used may be indicated using an attribute.
- Contacts – contact information if known
- Vital dates (source = LIDO):
 - date of birth, if known.
 - date of death if known.
 - Display date
- Place of birth – Use of a controlled vocabulary such as <http://www.geonames.org/> is recommended, and the vocabulary used may be indicated using an attribute.
- Place of death – Use of a controlled vocabulary such as <http://www.geonames.org/> is recommended, and the vocabulary used may be indicated using an attribute.
- Place of activity – Use of a controlled vocabulary such as <http://www.geonames.org/> is recommended, and the vocabulary used may be indicated using an attribute.
- Biographical note – The element may be repeated using the XML:lang attribute if the element value is available in alternate languages. A preferred/alternate attribute may be used to indicate which value is preferred.

4.7 Contacts

(source = MIDAS).

Information about how a person or organisation can be contacted

- Name – title, first name, last name, other name
- Role – the particular role played by the person or organisation
- Organisation
- Address – the postal address of the person or organisation
- Phone
- Fax
- Email

4.8 Address

The postal address for a building, contact, etc.

- Building name
- Number in road – the number in a road or street used to identify a property
- Road name
- Town or city
- Postcode or zipcode
- Locality –
- Admin area – the name by which an administrative area is known, e.g. Shropshire
- Country

4.9 *Publication statement*

- Publisher
- Place – of publication
- Date – of publication

5. References

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