



DOCUMENT CONTROL	
Title:	Map Depiction - an annex for MIDAS
Author:	Edmund Lee, MIDAS Editor Email: edmund.lee@english-heritage.org.uk Post: English Heritage Data Standards Unit National Monuments Record Centre Kemble Drive Swindon SN2 2GZ
Derivation:	<ul style="list-style-type: none"> • Peer review version • Comments from Peer review April 2004 • Recommendations to FISH May 2004 • GI Gateway metadata standard (March 2004)
Origination Date:	09 July 2004
Revisor(s):	Edmund Lee
Date of last revision:	30 July 2004
Date Printed:	Thursday, 12 August 2004
Version:	1.0
Status:	Complete
Summary of Changes:	
Circulation:	Public release via English Heritage website Also available via FISH website www.fish-forum.info
Required Action:	
File Name:	E:\My Documents\Fish\Projects\MIDAS 2nd edition\MapDepiction
Approval: (Signature)	Forum on Information Standards in Heritage attending members 13 th August 2004

↗ *Map Depiction*

Introduction

This document is an annex to 'MIDAS: a manual and data standard for monument inventories'. It should be read together with the full text of the MIDAS standard, which can be download via the Forum on Information Standards in Heritage web site, www.fish-forum.info. It is intended that this annex will be incorporated into the text of a second edition of the MIDAS standard (in preparation).

The structure of this annex follows that of the MIDAS data standard. Part One discusses the information requirements of mapped information. These are presented as a new 'Information Scheme' called **Map Depiction**. This includes new 'units of information' suitable for this sort of data. Cross-reference is made to the use of other Information Schemes: these are detailed in the main MIDAS data standard. Part Two defines the additional units of information. A worked example and supplementary glossary are also included.

Two types of recorded item are covered by this annex. These are individual features, generally derived from MIDAS inventory entries, and 'layers'. Layers may consist of groups of individual features, or they may be other types of mapped data, such as base maps..

PART ONE

Definition of the Map Depiction Information scheme

This information scheme includes *information to improve the understanding and use of MIDAS inventory entries as features on maps, and associated map layers*. This is often referred to as 'metadata'.

MIDAS inventory entries suitable for depicting as features on maps include for example, monuments, such as burial mounds, buildings, battlefields or find spots of significant artefacts; or areas covered by particular events such as an archaeological excavation; or the area to which a particular item of archive such as a photograph relates.

MIDAS does not, at present cover details recorded within a particular site, for example features within a building or archaeological contexts recorded by an excavation. This level of detail is therefore not covered by this annex.

Key Questions:

What does this feature on this map mean? Can I rely on this map?

Maps have played an important role in the development of inventories of the historic environment. Ancient monuments frequently appeared as landmarks on the earliest published maps, and the accounts of early surveyors were in some cases the first modern record of the existence of an archaeological site. Plotting of MIDAS inventory entries onto maps provides a visual index to the content of a MIDAS inventory.

Printed maps annotated to show monument locations are still a common feature of many inventories. However, digital maps have made the combination and analysis of a variety of sources of historic environment information more practicable. A modern geographic information system (GIS) can store, search, filter and display digital maps and additional data at a variety of scales. In addition to conventional topographic maps, a vast range of other digital information sources is available. For example:-

- Specialist maps such as those showing geology or soil types, hydrology or vegetation.
- Digital terrain models which convert the contour information of a standard topographic map into a three-dimensional model of the landscape.
- Historic maps converted into digital formats, so that historic and contemporary views of the landscape can be compared.
- Aerial photographs copied into digital formats, and superimposed upon the correct spatial position so that a real view can be compared with mapped features.

Using a GIS, the typical content of MIDAS inventories can be electronically plotted over the map background to depict monuments, events, proposed work etc. A GIS with access to appropriate data can also analyse how the MIDAS information relating to the historic environment relates to information about other aspects of the landscape or urban fabric.

Much of what follows assumes the use of a digital GIS. However, many of the issues are still relevant to the use of paper maps.

Key Issues:

What information should be recorded?

A symbol or boundary or line marked on a map is of little value on its own. Information about what the symbol means needs to be recorded as well. The details of

the map itself are also relevant. The user of a map needs this information to interpret the map to decide if it is relevant. Typical questions that a user might have include for example: is it up to date? What restrictions apply to the areas depicted? What information is this map based upon? On a traditional printed map the symbols used will in most cases be explained in a key or legend printed alongside the map. This helps with the interpretation of a particular feature. Publication details that apply to the whole map such as the scale, publisher or publication date might also appear to assist interpretation of the map as a whole. In digital mapping this information is just as relevant. The term 'metadata' is often used in data standards to describe this sort of supplementary information that assists in making sense of some other piece of data (in this case individual mapped features or the whole map).

Recommendation: Features on maps derived from MIDAS inventories should be cross-referenced to the inventory, using the **Internal Cross-Reference Primary Reference Number** unit of information, to ensure that it is possible for users to obtain information about what a symbol or marked area means, and to interpret it correctly.

Recommendation: MIDAS recommends additional units of information specific to recording of features on maps. These are listed in table 1. This information should be recorded at the time that the feature is mapped.

Recommendation: the details of any maps or other sources used in the preparation of a mapped feature based on a MIDAS inventory entry depiction should be recorded. suitable set of units of information is given in table 1.

Information 'Layers': one or many?

In a GIS system, depictions of particular features are commonly grouped together to form 'layers' of information. Like the transparent overlays that sometimes are used with a conventional printed map, layers can help to customise the map for a particular purpose. For example layers with buildings or roads information can be hidden, so that the layers including the natural landscape (hills, rivers etc) are easier to see. In the same way, features included in a GIS can be grouped to present selected data in particular ways for specific purposes. For MIDAS mapped features to be grouped in useful ways it is important that adequate information is recorded to support the definition of particular groups or layers. Typical ways in which entries might be grouped include e.g. Events grouped separately to Monuments; Monuments grouped by the precision of their co-ordinates; monument records relating to buildings grouped separately to those relating to find-spots etc.

A potential drawback of using several layers is the possibility of having to manage separate features which depict the same MIDAS inventory entry on different layers in the GIS, or on different map bases. There is a similarity to the general MIDAS issue of 'unit of record' in construction of an inventory: a more detailed approach lends itself to greater flexibility, but comes at a greater cost in terms of time to prepare the feature depictions, and possibly in more complex systems.

Recommendation: Each inventory should document the approach that it takes to developing GIS layers. Each GIS layer should have adequate documentation to assist

future users in understanding the layer, and to facilitate retrieval, and management. Suitable units of information are set out in Table 1 below.

Precision and Accuracy

It is important to understand the distinction between precision and accuracy. Precision is a measure of how refined or specific the information given about a location is. Accuracy is a statement of whether the recorded location actually corresponds with the true position of the recorded feature in the real world. It is possible for information such as a grid reference to be precise, but inaccurate (for example recorded to the nearest metre, but actually kilometres away from the correct location because the easting and northing have been transposed). Likewise it is possible for it to be imprecise, but accurate (for example a historic telephone box recorded to a one-kilometre square). Recorded information needs to be 'fit for purpose', that is, it should be good enough to serve the needs of its likely users. Recording information about map layers and map depictions, as recommended in this annex, helps to ensure that data is not inadvertently used for a purpose for which it was not originally intended.

Very precise grid references can be derived from GIS mapping systems, or from the use of modern surveying equipment using Global Positioning System (GPS) technology. In many applications this is appropriate, for example for engineering or planning. However care should be taken not to give a spurious impression of precision to data that is only known imprecisely.

For example, the location of a building may be known from a published source to the nearest 100 metres (a six figure Ordnance Survey grid reference such as TQ 245 678). For depiction on a GIS it will often be the case that a very precise grid reference is created by default by the software by adding additional precision to the grid reference (for example to the nearest metre) at TQ 24500 67800. Viewed at a small scale, for example on a county or national distribution map, the problem is not significant. However, when viewed at a large scale (say 1:1250) a symbol at this precise point could be many metres away from the accurate position of the building, and be shown on the wrong side of a street or in the middle of a lake.

Recommendation: The precision of the grid reference as derived from the original source should be recorded using the **Precision** unit to assist in correct interpretation of mapped entries.

Recommendation: when planning projects to create GIS data, the greatest degree of precision that resources allow should be used. Consider your own needs for precision, but also the needs of others who might use your data.

Recommendation: any concerns about the accuracy of data used to create features in a GIS should be recorded using the **Positional Accuracy** unit.

Points lines and polygons

Mapped features based on MIDAS inventory entries can consist of either single grid references (points), or several grid references used to define either a line or an area enclosed within a polygon. Each approach has advantages. Points are easy to

establish, and are particularly useful for the compilation of large-scale distribution maps. They may, however, give a misleading impression of covering the whole extent of a site or feature of interest. For example a single point recorded to 10m precision representing a large Iron Age hillfort, or the remains of a medieval abbey may mislead future users. One approach to reducing this problem is to include **Area** information, e.g. indicating a point, and that the site covers say '0.5 ha'. An alternative, if software used supports this, is to use a 'buffer' around the given point. If used the width of the buffer should be recorded in the **Buffer Zone Width** unit (Note that buffers can also be used with line and polygon data).

Lines and polygons provide a more detailed impression of the extent of an area to which a MIDAS inventory relates (especially for e.g. a linear feature such as a trackway, or a large project area). However, they take more time to produce and require more detailed information, and so are more costly to produce. Polygons also give more of an impression of precise and accurate boundaries, so it is essential to ensure that they are based on good quality information.

A special case of map depiction using polygons occurs where several polygons are needed to correctly represent a MIDAS entry. Examples include the representation of a series of excavations along the line of a proposed road, or the depiction of a designated area that includes a smaller area within the designation that is excluded. This might occur, for example, in the case of a protected burial ground which excludes the area of a modern house within it. In these cases it is important to record the relationship between the depictions.

Recommendation: always record the sources used in the creation of features.

Recommendation: As a minimum MIDAS depictions should identify a point. In the case of larger areas, the point depicted should locate the centre of an area feature, as well as it can be judged. Area or buffer information should be given if available.

Recommendation: Polygons or lines are best if good quality data and resources allow. If polygons and lines are used a centred point should also be identified to support depiction at various scales. The aim in defining a polygon is to include an outline of the area of interest and not to include internal detail of site morphology.

Recommendation: where several depictions relate to the same MIDAS entry, special care should be taken to record that they are depictions of the same feature, and should be viewed together to ensure full understanding.

Raster data

Raster data is composed of a grid of cells, covering an area of interest. In MIDAS inventories, the most frequently encountered raster data will be digital copies of photographs or scanned maps. These can be imported into a GIS to compare with the points, lines and polygons (technically 'vector' data) of the MIDAS features.

Although the data is in a different format, the same sort of information needs apply. It is just as important to know where the data has come from, how it has been processed how reliable it is, and what constraints exist on its use.

For example, a specific issue with raster data (for example a digitised air photo) is that it does not contain 'built in' grid references. It therefore needs to be 'registered' against several grid references before it can be used alongside vector data. It is important to know when working with raster data how this has been achieved, as it may affect accuracy.

Recommendation: Raster data files should be treated in the same way a information 'Layers', and appropriate information recorded about each file.

Mapping poorly located sites

Detail on a recently published map such as roads or river courses will usually be accurate and precise. In contrast, some types of MIDAS inventory entry may well be only known imprecisely, or based upon sources whose accuracy is difficult to assess. For example the location, extents and boundaries of field monuments may be poorly known, or simply not definable. What, for example is the 'edge' of a barrow cemetery, visible only on aerial photographs? This means that the depicted 'edge' of a site may rely heavily on interpretation and professional judgement as much as definite knowledge. The end user of a map should be made aware of any such limitations or they may be misled.

A special case of this problem occurs where sites are known only from documentary sources or antiquarian observation. Mapping the position of a monument which is described as 'North of the village' or 'at the town', or 'in the bay' inevitably involves some guesswork. Typically a kilometre precision is used, but the process by which grid references have been assigned in such instances should be documented, e.g. to indicate that the reference simply locates the village or town or geographic feature in question.

Recommendation: depictions of MIDAS entries should include the **Quality** and **Positional Accuracy** units of information to inform users of any limitations on interpretation.

What colours, symbols or line styles should be used?

Sharing of map depiction information can be assisted by the use of agreed sets of symbols, line styles etc. Any such agreed set will need to take account of a number of factors. These include:

- any constraints imposed by the software used (for example limits on colours or line styles available);
- the contexts in which map depictions might appear (for example at different scales, or combined with information from other sources)
- the need for clarity and distinctiveness from other symbols in use; the need to convey as much useful information as possible.

Recommendation: Given the possible issues listed above, MIDAS is not the appropriate place to recommend a particular symbol set or style. Instead it is recommended that information associated with a map depiction should be recorded to allow users to alter representation on a map, based on e.g. certainty of location. Layer descriptions should include the **Symbology** unit where sharing of this information is important.

How should monuments that have been destroyed or former landscape features be represented?


Recommendation: Map depiction information should support distinction between sites that are known only from documentary sources from those that are currently extant. Use of the **Evidence** unit of information is recommended, to distinguish, for example sites based on Conjectural or documentary evidence from those based upon extant structures or other physical remains.

Achieving a balance between data recorded for each layer and data recorded for each feature

Information recorded about a map layer should relate to all features grouped together in the layer. If the map depictions are consistent, (for example all depictions in the layer derived from the same base mapping, or depicted at the same scale) this will provide a more efficient means of recording the information. If however the map depictions are very varied, for example derived from maps at different scales, or originating from different sources, then it will be necessary to record information in both the map layer entry and the map depiction entry.

Recommendation: Information should be recorded in the most appropriate place. Duplication should be avoided as far as possible between the layer and feature entries.

Table 1.

 MAP DEPICTION Units of information
<p>BOLD indicates a new MIDAS unit of information. These are defined in the following section: Layer = recommended for use in layer description. Feature = recommended for use in recording depicted features. Some units may be used in both circumstances, depending on the needs of a particular inventory.</p> <p>*Access Constraints (Layer) *Data capture process (Layer, Feature) *Data Capture Scale (Layer, Feature) *Evidence (Feature) *Positional Accuracy (Layer, Feature) *Precision (Layer, Feature) *Quality (Layer) *Spatial Reference system (Layer) *Status (Layer) *North Bounding Coordinate (Layer) *South Bounding Coordinate (Layer) *East Bounding Coordinate (Layer) *West Bounding Coordinate (Layer)</p> <p>Area (Feature) Buffer radius (Feature) Symbology (Layer)</p> <p>*= MIDAS recommended unit of information</p> <p>Refer to Part Two of the MIDAS Data Standard for definitions and details of how to record these units of information, and the Dictionary of Units of Information set out below.</p>
<p>Related information schemes: (see the main MIDAS manual for details of these).</p> <p><input type="checkbox"/> Names and References: used to uniquely identify Layers or Depictions, to provide information on dates of creation and update, to identify the compiler, to relate them to additional information in the inventory (e.g. Location, Monument Character, Events, Monument Management) and to cross-reference them to external data resources.</p> <p>➔ Locations: used to record the grid reference data upon which depictions are based.</p> <p>● Resources: used to record additional information about map layers, or, where layers are not used, about the source material used to create a particular map depiction.</p> <p>☺ People, Organisations and Roles: used to record information about external contacts supplying data</p>

Supplementary Dictionary of MIDAS Units of Information

The following additional units of information have been defined for use in the Map Depictions annex to MIDAS. They are in addition to those defined in the main MIDAS data standard, and should be read in conjunction with that standard.

Each entry includes the following information:

Name:

The name by which the unit of information is referred to. This name should be used in inventory documentation to indicate that the MIDAS Data Standard is being applied.

Definition:

The purpose of a particular unit of information; why it has been included in the MIDAS standard. Once adopted by an inventory the definition of a unit of information should not be allowed to change to accommodate extra or related information. For example, **Civil Parish** should not be used to record details of town or village names in addition to defined civil parishes. Additional concepts should be recorded in additional units of information (e.g. Locality), or included by creating additional units of information outside the scope of MIDAS in your inventory. Breaking this rule will compromise the ability of the inventory to retrieve entries effectively.

Guidance:

Recommends an entry format or other considerations that should be taken into account for a particular unit of information.

Controlled entry?:

Recommends whether a centrally controlled list of acceptable terms should be used to create consistent entries. Where a recognised national list exists, the INSCRIPTION standard is referred to. (Details are given in Appendix Two).

Where a controlled vocabulary is recommended, but no existing list is referred to, advice on establishing an appropriate list is given in Appendix One.

Where 'Free-text' is shown here, the inventory should adopt a standard practice. Where searching the inventory using a free-text unit of information is necessary (e.g. Name is a common search requirement), retrieval is generally improved by:

- 1) Minimising the use of punctuation.
- 2) Avoiding the use of abbreviations, unless these are standardised and included in compilation manuals for the inventory.
- 3) Standardising accepted spelling using an agreed dictionary.

Occurs in:

Lists the information scheme or schemes that a particular unit of information occurs in.

Examples:

Instances of the sort of information that might appear in this unit of information in an inventory. Where necessary, additional examples appear in tables at the end of Part Two. Note that examples are given in upper case for clarity, with additional notes or labels in mixed case. An inventory should adopt upper or lower case consistently for entries in each unit of information, as appropriate for their needs.

Access Constraints

- Definition:* A description of any current restrictions on the use of a given resource.
- Guidance:* Essential to ensure that correct use is made of resources, especially those that have been acquired from other inventories or resource holders. These might include copyright restrictions on reproduction of the resource, or suitable acknowledgements that must be made
- Controlled Entry?:* Free text.
- Occurs in:* Resources, Map Depiction
- Examples:* (C) ENGLISH HERITAGE. AVAILABLE UNDER THE TERMS OF A LICENSE LIMITING PASSING ON OF THE DATA TO A THIRD PARTY

Buffer Zone Width

- Definition:* The width, in metres, of a zone, centred on a given feature, that defines a default area or buffer zone.
- Guidance:* This might be the radius of a circle centred on a point, or a buffer either side of a line feature, or the width of a zone around the outside of a polygon. Used to define the extent of an area around a sensitive or poorly defined site. This can be used, for example, to assist with site management, by requiring users to consult archaeological staff if proposed work falls inside the buffer.
- Controlled Entry?:* A single numeric value
- Occurs in:* Map Depiction
- Examples:* 100

Data capture process

- Definition:* The technique by which digital data included in an inventory has been captured.
- Guidance:* This will help future users of the data to understand how the data has been generated. The principle technique employed should be indexed in this unit. Additional notes can be added in the **Description** unit for a layer or feature.
- Controlled Entry?:* Recommended.

Occurs in: Resources, Map Depiction
Examples: HEAD UP DIGITISING, HARDCOPY SCANNING

Data Capture Scale

Definition: The scale of the map used in survey or the creation of a mapped feature
Guidance: This is recorded to help future users of the map depiction to interpret the data. If it is displayed against a map which has a significantly different scale to that at which it was first captured, misinterpretation is possible.
Controlled Entry?: Recommended.
Occurs in: Map Depiction
Examples: 1:1,250, 1:10,000, MIXED LARGE SCALE

East Bounding Coordinate

Definition: Easternmost coordinate of an area to which MIDAS entries relate.
Guidance: Used with **West Bounding Coordinate**, **North Bounding Coordinate** and **South Bounding Coordinate** to describe an area of interest. Helpful for documenting layers, and required by UK Government metadata for GIS datasets. For UK inventories, use absolute Ordnance Survey National Grid coordinate numbers.
Controlled Entry?: Recommended. Integer numbers should be recorded.
Occurs in: Map Depiction
Examples: The following examples locate the area of North Wiltshire:-
 East Bounding Coordinate: 41450
 West Bounding Coordinate: 37740
 North Bounding Coordinate: 20040
 South Bounding Coordinate: 16500

North Bounding Coordinate

Definition: Northernmost coordinate of an area to which MIDAS entries relate.
Guidance: See **East Bounding Coordinate**

Controlled Entry?: See **East Bounding Coordinate**

Occurs in: Map Depiction

Examples: See **East Bounding Coordinate**

Positional Accuracy

Definition: Positional accuracy of a digitised map feature.

Guidance: Used to indicate the positional accuracy either of features within a layer or of individual map features. The note might include any tests against source material that might have been applied, or warnings of possible problems

Controlled Entry?: Free Text.

Occurs in: Map Depiction

Examples: ESTIMATED AT +/- 1MM BASED ON VISUAL COMPARISON OF PLOTS AND SOURCE DOCUMENT
ESTIMATED AT +/- 1 MM, THOUGH NOTE THAT THE HISTORIC BASE MAP IS OF VARIABLE QUALITY.

Quality

Definition: Description of any quality checking to a map depiction or map layer.

Guidance: Details of the quality checking assist future users in interpreting a map depiction.

Controlled Entry?: Free text.

Occurs in: Map Depiction

Examples: BOUNDARIES ARE INDICATIVE BASED ON CURRENTLY KNOWN EXTENT OF ARCHAEOLOGICAL FEATURES. REFER TO COMPILER FOR CLARIFICATION.

South Bounding Coordinate

Definition: Southernmost coordinate of an area to which MIDAS entries relate.

Guidance: See **East Bounding Coordinate**

Controlled Entry?: See **East Bounding Coordinate**

Occurs in: Map Depiction

Examples: See **East Bounding Coordinate**

Spatial Reference system

<i>Definition:</i>	Name or description of the system of spatial referencing used.
<i>Guidance:</i>	Record the name of the system of co-ordinates or other geospatial referencing system used. In the U.K this will generally be the Ordnance Survey national grid, often referred to as 'OSGB 1936', or the Latitude and Longitude system ('WGS 84').
<i>Controlled Entry?:</i>	Recommended.
<i>Occurs in:</i>	Location, Map Depiction
<i>Examples:</i>	OSGB 1936

Status

<i>Definition:</i>	Describes the state of readiness of the resource for its intended use.
<i>Guidance:</i>	Recording of this information allows potential users to see if a resource is complete, or in draft form for example, or for resource managers to arrange for resources that are not available for publication to be treated separately
<i>Controlled Entry?:</i>	Free text.
<i>Occurs in:</i>	Resources, Map Depiction
<i>Examples:</i>	DRAFT, COMPLETE

Symbology

<i>Definition:</i>	Notes describing the preferred representation for depictions within a digital mapping layer
<i>Guidance:</i>	Recording of this information allows potential users to replicate the desired appearance of the data points in the layer, if practicality and software allows.
<i>Controlled Entry?:</i>	Free text.
<i>Occurs in:</i>	Map depiction
<i>Examples:</i>	BLUE SHIELD SYMBOL DEPICTS MONUMENTS WITHIN THE WORLD HERITGAE SITE AREA.

West Bounding Coordinate

<i>Definition:</i>	Westernmost coordinate of an area to which MIDAS entries relate.
<i>Guidance:</i>	See East Bounding Coordinate

Controlled Entry?: See **East Bounding Coordinate**

Occurs in: Map Depiction

Examples: See **East Bounding Coordinate**

Appendix: Worked Example

Westshire Historic Environment Record is introducing a GIS system to assist in its work to provide Westshire County Council with advice on planning applications, and also to document the historic character of the Westshire landscape. Data for the system will be inherited from the existing Westshire SMR database, which records monuments and also excavation and survey information as points. This will be supplemented by a program of research based on consultation of early maps.

Analysing their information needs, the decision is made to divide the available information into the following layers:

- 1) The point data from the existing SMR for Monument records
- 2) The point data from the existing SMR for Events
- 3) A new layer to store polygons derived from published sources, air photo interpretation, and map digitisation as these are created.
- 4) An historic environment character layer, for the results of environment characterisation projects.
- 5) A protected heritage layer to present Monument record data interpreted for use by non-specialists. For example, this will provide local authority planning departments with a simplified view of areas that should trigger consultation of the specialist heritage staff if development encroaches on that area.
- 6) A layer for raster images derived from historic air photo coverage.

Each layer will be documented to assist users, following a standard that meets the MIDAS recommendations. See Example 1 for a sample layer description.

Within each layer, individual features will be documented to give more specific detail. See Example 2 for a sample feature description.

Example 1 Westshire Layer entry data standard

The following table details the data standard adopted by Westshire SMR for GIS, with an example describing a layer of digitised point data for monuments, based on mid 20th century O.S. paper maps. The Layer information is taken to apply equally to all features within that layer. If this was not the case, then a greater amount of information would need to be captured for each feature.

Information scheme	Units of information * = recommended	Example	Notes
☐ Names and References	*Primary Reference Number	WE54300	Number assigned to this layer.
	*Date of Compilation	12-APR-2005	
	*Date of Last update	14-SEP-2005	
	*Name	WESTSHIRE SMR SITE DATA LAYER	Name given to this layer by the SMR
	*Description	Point data derived from the Westshire SMR GIS project.	Description of the data to assist future users.
	*Compiler	Heritage Service, Westshire County Council...	Compiler of this layer. Organisation and contact details may be appropriate.
● Resources	*Archive / Source Title	Westshire County Council 1:1250 map collection	Details of the base map collection used for creation of this map layer. May be repeated as necessary to document other sources of information used.
	*Date of Origination	1955	
	*Statement of Responsibility	Ordnance Survey	
	*Archive/Source Type	MAP	
	*Archive/Source Format	HARDCOPY	
	*Archive/Source Location	Westsham Record Office	
	*Archive/Source Reference	1960/2565	
*Archive Extent	15 sheets		
↗ Map Depiction	*Access Constraints	Copyright Westshire County Council	This relates to the digital GIS layer, not the original base maps.
	*Data Capture Process	HEAD DOWN DIGITISING	
	*Data Capture Scale	1:1,250	
	*Positional Accuracy	+/- 10 metres in most cases	
	*Quality	Some buildings have been demolished and cannot be located with precision. Please contact the SMR in cases of doubt.	
	*Spatial reference system	OSGB36	
	*Status	IN PROGRESS	
	Symbology	Red cross symbol indicates approximate centre of sites	
➔ Location	County	WESTSHIRE	Default value (only becomes significant if the data layer is provided to another organisation).

Example 2 Westshire Feature entry data standard

The following table details the data standard adopted by Westshire for document each feature within the GIS - in this example the monument record for a former water mill. For practicality, much of the 'Names and References' data and 'Location' data would be generated automatically by the GIS system, or derived from the existing SMR database. The Map depiction data would probably need to be entered manually for each depiction.

Information scheme	Units of information * = recommended	Example	Notes
☐ Names and References	*Primary Reference Number	WE54321	Number assigned to this depiction.
	*Date of Compilation	12-FEB-2005	
	*Date of Last update	14-FEB-2005	
	*Name	FURZEY MILL	Copied from the main SMR.
	*Description	Water mill built 1864 to serve...	Copied from the main SMR.
	*Compiler	Anne Farnham	Creator of this depiction.
	*External Cross-Reference Other Inventory Name	OS MasterMap TOID No.	Suggested example of linking to the Ordnance Survey MasterMap digital map database.
	*External Cross-reference Other Inventory Number	123456098765008	
	Internal Cross-reference Primary Reference Number	WE7854	Links this feature to the main SMR database entry.
	Internal Cross-reference Qualifier	RELATED TO	
✂ Map Depiction	Internal Cross-reference Primary Reference Number	WE54300	Links this depiction to the layer that it is part of, the Westshire Site Data Layer
	Internal Cross-reference Qualifier	PART OF	
	*Positional Accuracy	+/- 10m	
	*Data Capture Process	HEAD DOWN DIGITISING	
	*Data Capture Scale	1:1,250	
	*Evidence	CARTOGRAPHIC EVIDENCE	
➔ Location	Area	Approx 200 sq m	
	Buffer radius	50	
➔ Location	National Grid Reference Absolute Easting	42789	Copied or calculated from the main SMR entry
	National Grid Reference Absolute Northing	23867	Copied or calculated from the main SMR entry

GLOSSARY

6-FIGURE, 4-FIGURE, 8-FIGURE GRID REFERENCE: the number of figures quoted in a grid reference. In a conventionally quoted Ordnance Survey grid reference a 6-figure grid reference might be ST 587 423. The ST letters note the 100 km square subdivision of the O.S. national grid. The two groups of numbers denote the easting within that 100 km square and northing. This grid reference identifies uniquely a 100 metre square within the Ordnance Survey National Grid. A less precise 4-figure grid reference identifies a 1000 metre square, a more precise 8 figure grid reference identifies a 10 metre square.

DATA CAPTURE: commonly used term for the collection of data using digitisation or survey techniques.

LARGE SCALE maps e.g. 1:2500 maps where a feature of given size appears comparatively large.

MAP DEPICTION: representation of the location or area to which a specific MIDAS inventory entry relates on a map. Map depictions may be grouped to form map layers

MAP LAYER: a collection of related features within a digital map that can be treated as a group. A Layer may be derived from the grouping together of MIDAS Map Depictions, or it may be part of a separate digital map product.

RASTER DATA: Data formed from a grid of cells which together form a continuous surface, for example digitised pictures or maps which consist of a grid of picture elements ('pixels'). Often used as a background against which Vector Data (q.v.) can be displayed.

SMALL SCALE maps of a scale e.g. 1:50,000 maps where a feature of a given size appears small.

VECTOR DATA: Data formed from individual lines, points or polygons rather than as a continuous surface.

Acknowledgements

The Forum on Information Standards in Heritage gratefully acknowledges the contribution made by those who commented on a draft of this annex during its preparation in April 2004.

Oscar Aldred	Institute of Archaeology, Iceland
Anthony Beck	University of Durham
Suzy Blake	Staffordshire County Council
Nick Boldrini	North Yorkshire County Council
Tami Brady	Consultant
Jon Brett	Bristol City Council
Chris Brooke	Leicestershire County Council
Paul Cripps	English Heritage
Paul Cuming	Kent County Council
Claire Davies	Gwynedd Archaeological Trust
Ann Dick	Devon County Council
Lynn Dyson-Bruce	Consultant
David Evans	South Gloucestershire Council
Crispin Flower	exeGesIS SDM Ltd
Kate Geary	Devon County Council
Tim Grubb	Gloucestershire County Council
Catherine Hardman	Archaeology Data Service
Niall Hammond	Defence Estates
Mike Hemblade	North Lincolnshire Council
Brian Hopper	English Heritage
Sarah Jones	Museum of London Archaeology Service
William Kilbride	Archaeology Data Service
Eleanor Kingston	Lake District National Park Authority
Andrew Larcombe	Consultant
Gordon Le Pard	Dorset County Council
Richard Lee	
Neil Lockett	Worcestershire County Council
Rosemary Long	Lake District National Park
Catherine Maloney	Museum of London
Marion Manwaring	Dyfed Archaeological Trust Ltd
Peter McKeague	RCAHMS
Jen Mitcham	Archaeology Data Service
Martin Newman	English Heritage
Kieron Niven	Archaeology Data Service
Marion Page	English Heritage
Ingrid Peckham	Southampton City Council
Nigel Pratt	Hampshire County Council
Jeff Spencer	Clwyd-Powys Archaeological Trust
Nina Steele	Glamorgan Archaeological Trust
Graham Tait	Gloucestershire County Council
Emma Turner	English Heritage
Martijn van. Leusen	Rijksuniversiteit Groningen
Chris Waldren	Defence Estates
Rob Walker	British Standards Committee (BSI IST/36)
Chris Wardle	Staffordshire County Council
Kate Welham	