# SHED Technical Specification No. 3

# Polygons

## 1. Covering Polygon Class:

- **Archaeological Events**

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## 2. Introduction

This document is the technical specification to producing Archaeological Event polygons in line with the methodology developed during the Defining Scotland's Places pilot.

This technical specification has been developed by the SMR-Forum Scotland's Technical Working Group (TWG) and forms the third part of Polygon Technical Specifications (Middleton 2014; Nicholson 2016).

## 3. Background

The Defining Scotland's Places pilot ran for one year from April 2010, funded by Historic Scotland and managed by the RCAHMS and developed in partnership with the SMR Forum and ALGAO Scotland.

The main products of the pilot were:

- *Historic Environment Polygonisation Standards (Scotland)* (RCAHMS *et al 2011*)
- *"Defining Scotland's Places Technical Guidance" (RCAHMS et al 2011).*

Following the draft issuing of these Standards and Technical Guidance documents the Scottish SMR Forum agreed to produce guidance on geo-spatial attributes for datasets held by Scottish SMRs/HERs, to recommend a standard to be applied across the regional datasets to allow for ease of integration into a national portal. This led to the production of:

- *Geospatial Attributes for Historic Environment Data: Recommendations for local authority SMRs/HERs (SMR Forum 2011)*

This current document adopts the principles laid out in Historic Environment Polygonisation Standards 2011[1] and conforms to Polygon-specific SHED Technical Specification Nos 1 & 2.

All of the SHED Technical Specifications can be downloaded from http://smrforum-scotland.org.uk/

[1] https://canmore.org.uk/content/historic-environment-polygonisation-standards-scotland [Last accessed 15th May 2017]

# 4. Definitions

1. An **Archaeological Event** is defined as "*a single episode of primary data collection over a discrete area of land. This event can only consist of one investigative technique and is a unique entity in time and space*" (Bourn 1999). Two types of archaeological event polygons were identified by RCAHMS (2009) and a third type was added during consultation with the SMR Forum Scotland Technical Working Group (2017).

   a. **Event Extent Polygons** defines the limits of an event. This is the boundary around an area of land that has been investigated. Within this boundary all, or a percentage of, the land may have been investigated. An event extent polygon may also be referred to as the study area or the limit of survey. An event extent polygon should not be buffered.

   b. **Intervention Extent Polygons** define the known limits of fieldwork interventions. These will be the limits of individual elements of work within an event. An intervention is any form of physical intervention and will include excavation trenches, sondages and test pits. Intervention extent polygons should not be buffered.

   c. **Event Discovery Polygons** define an area within which an event has been undertaken but where there is insufficient information to produce either and **Event Extent** or **Intervention Extent** polygon. The shape of the polygon is arbitrary and may be anything from a grid square to a county boundary. An Event Discovery polygon does not define a record's known extent.

2. **Attribution** is the structured information attached to a polygon class in a download format. A download or exchange format is where the polygon data is independent of any associated master database. In a database a polygon is just one attribute among many associated with a record. The current national standard for heritage databases is MIDAS Heritage[2]. In a download format a polygon must retain sufficient attribution to enable it to be used without ambiguity and it must include the unique identifier of a record in either the local or national record. This technical specification details the minimum attribution required to achieve this.

**Event Extent**


**Intervention Extent**


[2] http://heritage-standards.org.uk/midas-heritage/ [last accessed 15th May 2017]

## 5. General principles

1. **Metadata** – tbc
2. **INSPIRE Directive** - The INSPIRE (Infrastructure for Spatial Information in Europe) Directive (2007) mandates all European Union member states to share environmentally related datasets so that they can be easily accessed by other public organisations within their own country and in surrounding European countries. Key to delivering INSPIRE is the establishment of Spatial Data Infrastructures (SDIs). SDIs embrace the policies, human resources and related activities needed to acquire, process distribute, use, maintain and preserve spatial data.
3. **Archaeological Event** polygons must not not use any source that might limit or impose restrictions on its dissemination. In copyright, licensed data must not be used.
4. **Event Extent**, **Intervention Extent** and **Event Discovery** polygons have the same attribution structure
5. **Event Extent** polygon defines the extent of a record.
6. **Intervention Extent** polygon defines the extent of an intervention
7. **Archaeological Event** polygons should not be buffered.
8. **Negative Events**
    a. *Informing the Future of the Past* (2007) provides an excellent summary of negative events
    "Sometimes archaeological surveys, evaluation and other investigations take place but find no evidence for human activity (referred to as negative evidence). However, information about the methods and techniques used and the circumstances in which these events occurred is valuable to archaeologists planning subsequent events on the same or adjacent sites. Therefore, it is recommended practice to create event records whether or not the event produces evidence for human activity on the site."
    b. Creating polygons for negative events is equally as important as creating them for events that find traces of human activity.
9. **Maritime events** where the extent of a maritime event can be defined this should be created.

## 6. Attribution

MIDAS identifies nine mandatory units of information or attributions a polygon requires for it to be MIDAS compliant. These are:

| Units of Information | Sample information |
|---|---|
| Primary Reference Number | 123 |
| Primary Reference Number Type | Event Extent |
| Compiler (Organisation) | XYZ Archaeology group |
| Date of compilation | 23-June-2009 |
| Date of last update | 23-June-2009 |
| Positional Accuracy | Based on field survey using hand held GPS |
| Spatial Feature Type | Polygon |
| X Coordinate | 341081 |
| Y Coordinate | 716127 |

The following is a list of the data fields attached to both **Event Extent** and **Intervention Extent** polygons. Field names are limited to eight characters.

## FID

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Field Identifier (ObjectID)** | Auto number | auto | n/a | The field identified is created automatically and is unique within each dataset. It is a function of each dataset and should not be used as a UID. | The FID is not the primary reference number. EVENT_ID (see below) should always be used when referencing a record. |

## CLASS

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Event Class** | TEXT | 25 | n/a | The CLASS field is the top level thesaurus term. The data should be sourced from an Events Thesarus. | Controlled data entry:<br>• Intrusive Event<br>• Non Intrusive Event |

## TYPE

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Event Type** | TEXT | 254 | n/a | The TYPE field is the second tier thesaurus term. | Controlled data entry:<br>The FISH Events Type Thesaurus (Available at http://thesaurus.historicengland.org.uk/thesaurus.asp?thes_no=566&thes_name=FISH%20Event%20Types%20Thesaurus accessed 12 July 2016) |

## POLYCLAS

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| ***Polygon Class*** | *TEXT* | *25* | *n/a* | Where multiple polygon classes are used together this field clarifies the polygon class consulted | *Controlled data entry:*<br>• *Event Extents*<br>• *Intervention Extents*<br>• *Event Discovery* |

## CONTACT

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Contact point for more information** | TEXT | 25 | n/a | This field provides the user with guidance on who to contact for more information. The default value should be the local authority archaeological service. | |

## EVENT_ID

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Event unique ID** | TEXT | 25 | Multiple values should be comma separated | Events and Intervention extents will have their own unique Event reference number. This field enables the polygon to be linked to more detailed information held elsewhere. Detailed information like trench number, area number or context number should not be duplicated in the Event and Intervention polygons but should be available in the linked data | |

## EVENT_URL

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Link to event record** | HYPER LINK | 254 | n/a | Where the event record is available online, the link should be embedded | |

## CAN_URL

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Link to CANMORE entry** | HYPER LINK | 254 | n/a | Where the event has been added to Canmore, the link should be embedded. | |

## X

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Easting** | Number | auto | n/a | This field should contain a six figure grid reference based on the Ordnance Survey OSGB36 datum. The coordinate entered should be a single location that best locates the record. The point location should sit within the area polygon. | |

## Y

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| Northing | NUMBER | auto | n/a | This field should contain a six figure grid reference based on the Ordnance Survey OSGB36 datum. The coordinate entered should be a single location that best locates the record. The point location should sit within the area polygon. Note: Due to the length of Britain some six figure grid references are seven figures long in the Y axis. | |

## METHOD

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| Polygon Capture Method | TEXT | 50 | n/a | The method used to capture the polygon. | Field Survey - GPS<br>Field Survey - TST<br>CAD<br>GIS |

## SOURCE

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| Representation source | TEXT | 254 | n/a | The source, map, chart, aerial image or document used to define a polygon | |

## ACCURACY

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| Source Accuracy | TEXT | 15 | n/a | This field gives the user information on how confident they can be in the accuracy of the polygon. The field is linked to the accuracy of the source data. | Controlled data entry:<br>• Within 1m<br>• Within 5m<br>• Within 10m<br>• Within 25m<br>• Within 50m |

## C_SCALE

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| Capture Scale | TEXT | 25 | n/a | The scale that the polygon was captured at in the GIS | e.g. 1:1250 |

## COMPORG

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Compiler - organisation** | TEXT | 75 | n/a | This field provides the user with a guide to the organisation that created the polygon and populated the attribution. | |

## COMPDATE

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Date of compilation** | DATE | n/a | | The date the polygon is processed. This may also be the date the polygon was created but if this is not known, it is not essential. | |

## UPDATE

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| **Date of last update** | DATE | n/a | | Date of last edit of polygon. Knowing the date of update enables different parties to be sure they are using the same information. | |

## NOTES

| Full Name | Format | Size | Multiples | Description | Recommendations |
|---|---|---|---|---|---|
| Notes | TEXT | 254 | n/a | Free text notes. (Note: Limited to 254 in GIS download format.) (Note2: May be unlimited MEMO field if data is stored in a database. This will be truncated to 254 if the data is exported in a download format. If this is the case it is important to make sure key notes are stored in the first 254 characters of this field or the notes state: ”Long note: Please consult if truncated” | |