

## Environmental Section Oracle Recording Forms

This manual discusses each of the forms available on the menu screen **Assessment Level Environmental Forms**.

1. **Hand collected shell and human bone data.**
2. **Combined processing and residue description form.**
3. **Special sample form.**
4. **Animal bones from the hand collected and sample levels.**
5. **Dendrochronological information.**
6. **Archive animal bone data. (Pre-assessment)**

These are discussed in the following manner:

1. **Title** : The form's number and name as listed on the menu system.
2. **Figure**: A screen shot(s) of the form itself.
3. **Purpose**: A brief description of what the form is built to record.
4. **Minimum to COMMIT**: Here are listed the block and field names of those fields that *must* receive a value for a data in the form to be committed. Thus new rows must have an entry in each of these fields, while existing rows that are updated will only be committable if these fields are not null. Controls for uniqueness ensure that an attempt to COMMIT data to a table that already holds identical rows will fail. A failure of this type can be identified by pressing the F10 key (show error screen) after the error has occurred.
5. **Block descriptions**: Each block in the form is then described in the order of use. The description consists of two halves. The first lists each field name in the block as printed on the screen, and the data type and size that the field accepts. If this field is followed by a **NN**, this indicates that the field must be filled out, (i.e. it must be **Not Null**). In a single block form, all such NN fields must receive a value. In a multi block form however, it is only the NN fields of the first block that must be filled out in order for a record to be committed. It is only when data is to be inserted into further blocks, that the NN fields of those other blocks have to receive values. The letters **LOV** after a field name indicate that a list of values, (acceptable key codes) exist for that field which can be seen by pressing the F6 key when in that field. The validation rules that apply to each field are described here.

# 1. Hand collected information

Figure

HAND COLLECTED HUMAN BONES AND SHELLS	
Sitecode	Context
-----	
Human bone details	Details of shells
Skull _____	No. of bags _____
Arms _____	Weight _____
Torso _____	Marine species _____
Legs _____	Terrestrial species _____
Condition _____	Freshwater species _____
Comments _____	Comments _____
-----	
Press F5 to COMMIT all your entries	
Press <TAB> to move between fields and F3 to move between blocks	
Count: *0	<Replace>

Screen 1

## Purpose

To record summary details of human bones and shells recovered by hand collection from a given context.

## Description

The form consists of three blocks; a control block, (see 'Control Blocks' in the general forms user guide) and two others that place data into two tables. The form is arranged on a single screen. Block 1 is a control block, which means it controls what data is recalled into the other two data blocks of the form. Thus when the form opens a sitecode and context is required in block 1 before you can navigate to block 2, and the act of providing that sitecode and context ensures that any data already recorded for that context, (i.e. any hand collected human bone or shells ) will be recalled into the appropriate data block(s). If no data exists for the context you supply, then the two data blocks will remain blank, awaiting your data.

## Minimum to COMMIT - General

Block 1 <Sitecode>, <Context>

For block 2 <Condition>

For block 3 <No of bags>, <Weight>

## Block 1

<Sitecode> char 8 NN

<Context> number 5 NN

This consists of two fields into which are entered the <Sitecode> and <Context> number (non-decimals only) of that context from which hand collected material was recovered. In use, the procedure is that a sitecode and context are supplied, then the next block, (F3) key is pressed. As well as putting the cursor into the next block this action also executes a query on each of the two data blocks and will return any data already recorded about hand collected human bone and shell for that context. This ensures that you do not enter data twice, and that subsequent querying of the data on an ad hoc basis is straightforward.

### **Block 2**

**<Skull> number 1**  
**<Arms> number 1**  
**<Torso> number 1**  
**<Legs> number 1**  
**<Condition> number 1 NN**  
**<Comments> char 40**

The first four fields of this block, **<Skull>**, **<Arms>**, **<Torso>**, **<Legs>** simply record the presence of general parts of the body, and take no account of quantities. For example the **<Skull>** field receives a 1 if there is 1 or 10 skulls, (or of course skull fragments) that have been collected, while the **<Arms>** and **<Legs>** fields receive a 1 if there is one or more left arms or legs present, and 2 if there are right arms or legs present *as well*.

The **<Condition>** field is the minimum required to commit in this block, and indicates the general state of the bone material; 1= Good, 2= Medium and 3= Poor. Finally a 40 character **<Comments>** field is provided.

### **Block 3**

**<No. of bags> number 2 NN**  
**<Weight> number 5,3 NN**  
**<Marine species> number 1**  
**<Terrestrial species> number 1**  
**<Freshwater species> number 1**

As we wish to record some measure of the volume of material from which the shell details are derived, the field **<No. of bags>** records the number of bags of hand collected shell that *are actually being assessed*. This figure may be different from either the number of bags of hand collected *material*, or the number of bags of hand collected shell *initially* gathered on site. Similarly the **<Weight>** field records the weight in kilograms of shell that is actually being assessed. **<Weight>** can be recorded up to tens of kilo-grams and down to a precision of three decimal places.

The next three fields, **<Marine species>**, **<Terrestrial species>** and **<Freshwater species>** simply require a code to indicate whether either of the two types of molluscs are present; 1 if present null if not. The final field **<Comments>** allows a 40 character comment to be made.

## 2. Combined processing and residue description form

### Figures

PROCESSED SAMPLE DATA: Screen 1 (RESIDUE DESCRIPTION: Screen 2)  
 Sitecode \_\_\_\_\_ Context \_\_\_\_\_ Sample \_\_\_\_\_

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Process type>>>	Flot/wet sieve	Bulk sieve	Water logged	Any left unprocessed?
Processed Volume:	_____	_____	_____	_____
Sieve size:	_____	_____	_____	_____
Volume of wet sieve residue:	_____	Comment about this sample		
Was a flot present?:	_____	_____		

---

Process Constituent	Abund	Diversity	Comment
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

Remember a process/constituent may only appear once in a sample

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Press F5 to COMMIT all your entries. Press F3 to switch between blocks.  
 Press <TAB> to move between fields and the arrow keys to move between rows.

Count: \*0 <Replace>

Screen 1

RESIDUE DESCRIPTION Screen 2

Identity	Proportion
_____	-
_____	-
_____	-
_____	-
_____	-
_____	-
_____	-
_____	-
_____	-
_____	-
_____	-

---

Press F5 to COMMIT all your entries, deletions and updates.  
 Press <TAB> to move between fields, arrow keys between rows, F3 between blocks.

Count: \*2 <List><Replace>

Screen 2

### Purpose

The aim of this form is to record details of

- what sort of samples were taken from which contexts,
- what those samples produced in terms of environmental remains,
- the residue produced by certain sampling techniques descriptions.

The first purpose is catered for by the second block on screen 1, where the processes to which a sample has been subjected are recorded. The second purpose is catered for by the third block on screen 1,

where recovered environmental remains are recorded in terms of the constituent, (Bird bones for example), the abundance and diversity of that constituent, and the type of sample in which the constituent was noticed, (Bulk, wet sieve residue, flot or a waterlogged sample - See the discussion of block 3 for details).

The third purpose is catered for by the single block on screen 2, and this is to describe the residue produced by the wet sieving of the sample. Specifically a description of the matrix within which the various environmental remains exist, (much in the manner of a sediment description) is made by specifying the mineral constituents of the residue, (although Peat and a general Organic class are included) and the proportion of the whole matrix that each constituent comprises.

### **Description**

The form consists of four blocks; a control block and three others that place data into three tables. The form is arranged over two screens. Block 1 is a control block, which means it controls what data is recalled into the other three data blocks of the form. Thus when the form opens a sitecode, context and sample number are required in block 1 before you can navigate to block 2, and the act of providing that sitecode, context and sample number ensures that any data already recorded for that sample, will be recalled into the appropriate data block. If no data has already been recorded for the sample you specify, then the data fields will remain blank, awaiting your data.

### **Minimum to COMMIT**

Block 1 <Sitecode>, <Context>, <Sample>

For block 2 <Volume of wet sieve residue >

For block 3 <Process>, <Constituent>, <Abund(ance)>, <Diversity>

For block 4 <Identity>, <Proportion>

### **Block 1**

<Sitecode> char 8 NN

<Context> number 5 NN

<Sample> number 5 NN

This consists of three fields into which are entered the <Sitecode>, <Context> number (non-decimals only) of that context from which the sample was taken, and finally the <Sample> number itself. In use, the procedure is that a sitecode, context and sample number are supplied, then the next block, (F3) key is pressed. As well as putting the cursor into the next block this action also executes a query on each of the other three tables to see whether there is already data in the database about the sample you are about to record. This ensures that you do not enter data twice, and that subsequent querying of the data on an ad hoc basis is straightforward.

### **Block 2**

<Flot/wet sieve - Processed Volume> number 3

<Flot/wet sieve - Sieve size> number 3

<Volume of wet sieve residue> number 3 NN

<Was a flot present?> char 1

<Bulk sieve - Processed Volume> number 3

<Bulk sieve - Sieve size> number 3

<Waterlogged - Processed Volume> number 3

<Waterlogged - Sieve size> number 3

<Any left unprocessed?> char 1

<Comments about this sample> char 40

The first column of four fields in the block under the heading <Flot/wet sieve> record details of the wet sieving process. The first of these <Flot/wet sieve - Processed Volume> records the volume of wet-sieved material in whole litres. The second <Flot/wet sieve - Sieve size> requires that the sieve size which was used for that material is specified from amongst those currently allowable, 0.5, 1 mm mesh. The third field in the column, <Volume of wet sieve residue> records the volume in whole litres of the residue left *following wet sieving*. This field requires a value, however if for some reason the

<**Volume of wet sieve residue**> is unknown either because the record has been lost or because a coarse mesh was used and the residue was not measured, then a 0 (zero) is acceptable, although NOT encouraged. The final field in the column, <**Was a flot present?**> should receive a Y if flotation was carried out *and* a flot sample was saved during the wet sieving process.

The next two fields; <**Bulk sieve - Processed Volume**> and <**Bulk sieve - Sieve size**> hold the same particulars as described for the adjacent Flot/wet sieve volume and sieve size fields, except that here the process involved is bulk sieving. Thus <**Bulk sieve - Processed Volume**> records the volume in whole litres of the sample that was bulk sieved, and <**Bulk sieve - Sieve size**> the sieve size used to do so, which should be either 5 or 8mm. The volume of the bulk sieve residue is not measured.

Fields seven and eight, <**Waterlogged - Processed Volume**> and <**Waterlogged - Sieve size**> hold the volume and sieve size used for any waterlogged sample. As waterlogged samples will frequently be in the form of 250 gram sub-sample, this volume should be entered as 0.25 since the unit of volume is the litre not the gram. The sieve sizes acceptable for waterlogged samples are 0.25, 0.5, 1, 2 and 4mm. (See \* below)

The remaining fields <**Any still left unprocessed?**> and <**General comments about this sample**> are straightforward. The first requires that the existence (rather than any attempt to quantify) of any further component of the sample yet to be processed is indicated by a Y. If there is no more of the sample left, then a 'N' can be entered. If you are uncertain then the field can be left null, although it is obviously in your interests for the existence or otherwise of further components of the sample to be verified as soon as possible. The final field allows for a 40 character comment to be made about the sample.

\* In the next block the product of each process in terms of the environmental remains they produced is recorded. The aim of recording the volume and sieve sizes used in the manner just discussed, is so that we can qualify the abundance and diversity of the environmental remains that a particular process generated by describing the detail at which that search was conducted.

For this reason, if part of a sample is processed at one level of detail using a certain method, 10 litres wet sieved with a mesh of 0.5 for example, and then 5 further litres are sieved at a mesh size of 1mm it would be impossible to keep the resultant environmental constituents of each episode of processing separate. *Thus if such dual processing does take place the second episode should receive a separate sample number and thus record.* An alternative is to record the finest sieve size that is used.

### **Block 3**

<**Process**> char 2 NN

<**Constituent**> char 12 NN LOV

<**Abund**> number 1 NN

<**Diversity**> number 1 NN

<**Comment**> char 40

In this block the abundance and diversity of the environmental constituents observed following processing are recorded. Each line records from which of the processes, (for a single sample may be subjected to more than one process) each of the recorded constituents came.

The first field <**Process**> records a code to indicate which process, (the details of which were filled out in the previous block) produced the <**Constituent**> that is recorded in the next field. Thus bird bone recorded following *bulk* sieving will receive a B in the <**Process**> field and 'BONE BIRD' in the <**Constituent**> field. Bird bone found following *wet* sieving would receive a W in the <**Process**> field and 'BONE BIRD' in the <**Constituent**> field.

The <**Constituent**> field can be filled in directly or by making a selection from the list of acceptable terms that are available by pressing F6. The structure of this list follows that of the current paper form. Thus for plant remains the first part of the code is waterlogged, (WLG) mineralised, (MIN) or charred or (CHD). Animal bone are all preceded by BONE, i.e. BONE BIRD, BONE FISH, BONE L MAM etc., while INV and MOLSC precede various invertebrates and molluscs. The sub-classes within those groups are as listed on the form, i.e. waterlogged seeds, waterlogged grain, waterlogged other,

mineralised seeds, mineralised grain etc. There are also a number of codes that do not appear on the old list: BONE AMPHIB, BONE HUMAN, CESS, COPRO (coprolite), EGGSHELL, INV CRABS, INV EPHIPPIA, WLG MOSS, WLG ROOTS, WLG STEMS. The sub-class 'OTHER exists as 'MISC' in this list.

The next field < **Abund** > records the abundance of the particular constituent in the standard scale of 1= Occasional, 2= Moderate and 3= Abundant. < **Diversity** > records that quality of the constituent in the classes 1= Low, 2= Intermediate and 3= High. The final field, < **Comments** > allows for a 40 character comment about the constituent to be made.

### **Block 3**

< **Identity** > char 7 NN LOV

< **Proportion** > char 1 NN

In this final block the residue resulting from the *wet sieving* of the sample, is described. This is done by a material type being supplied in the field < **Identity** > and the amount of that type that was present as a proportion of the whole residue matrix being recorded in the < **Proportion** > field. The < **Identity** > field can be filled in directly by the user, or by selecting a value from among those that are acceptable which is displayed by pressing the F6 key. The < **Proportion** > must be one of A= Abundant (>20%), M= Moderate (5-20%) and O= Occasional (<5%).







**<Measurable> number 3**  
**<Long bones> number 3**  
**<Comments> char 40**

The first three fields **<Sitecode>**, **<Context>**, **<Sample>** must all receive a value. IF HAND COLLECTED MATERIAL IS BEING RECORDED THEN IT MUST RECEIVE THE SAMPLE NUMBER 0, (zero). A check is made when leaving the **<Sample>** field to ensure that the record you are about to create does not already exist in the database. If it does the fields are cleared and you are told to perform a query to bring this data up. This saves entering the data and then finding out that a row already exists in the database when you attempt to commit it.

The first four fields, **<Bags>**, **<Weight>**, **<Fragmentation>** and **<Preservation>** all require a value for a row to be acceptable to the underlying hand collected animal bone table. As we wish to record some measure of the volume of material from which the animal bone details are derived, the field **<Bags>** records the number of bags of hand collected or sampled animal bone that *are actually being assessed*. This figure may be different from either the total number of bags of animal bone, or the number of bags of animal bone initially collected on site. Similarly the **<Weight>** field records the weight in kilograms of the animal bone that is actually being assessed. **<Weight>** can be recorded up to tens of kilo-grams and down to a precision of three decimal places.

The **<Fragmentation>** and **<Preservation>** fields, together give an indication of the general state of the recovered animal bone. **<Fragmentation>** is measured by stating the *average* size of the bone fragments, by assigning then to one of the following classes; 1= <2.5cm, 2=2.5-7.5cm , 3=>7.5cm. **<Preservation>** provides a very general statement of the preservation of all the animal bone present and is classed as follows; 1= Good, 2= Medium, 3= Poor. The field **<Mixed>** requires a Y, if the contents of the sample under consideration exhibits a mixed state of preservation, otherwise it is left null, which indicates that the sample is in a similar state of preservation

The field **<Amount>** requires a numeric estimate of the number of bones in a sample/context to be made. **<Amount>** must be filled out and provides an overall idea of the amount of material present that is then broken down into the following four fields that use simpler size classes.

The following five fields, **<Mammal>**, **<Small mammal>**, **<Fish>**, **<Bird>** and **<Amphibian>** simply require a code to indicate the rough quantity of the each material present. The classes in all cases are 1=1-10, 2=11-100 and 3=>100.

The following four fields, are all counts. That is, how many **<Mandibles>**, **<Epiphyses>**, **<Measurable>**, **<Long bones>** are present in the sample under consideration..

The final field **<Comments>** allows a 40 character comment to be made.

**Block 2**  
**<Species> char 4 NN LOV**  
**<Part> char 3 NN**  
**<Age> char 2**  
**<State> char 10**

The **<Species>** field requires a value that may be typed in directly or chosen and inserted from the list that is available by pressing F6. The **<Part>** field also requires a value that indicates which part of a certain species is present, with the current options being H= Head, HC= Horn core, VR= Vertebrae, UL= Upper limb, LL= Lower limb, MCT= Metacarpels and tarsals, PS= Phalanges and sesimoides. The **<Age>** field can be left blank to indicate that the material is from a mature animal, or the codes FN= Foetal/neo-natal or JV= Juvenile may be used.

The final field **<State>**, currently accepts up to four codes which may all be entered into the same field. These codes are BT= Butchery, BN= Burnt, PA= Pathology and GN= Gnawing. Validation of this field allows these pairs of letters to be put in any order, i.e. GNBNPA. If any pair is not recognised e.g

GNBMPA then the field is cleared and a message indicates the error. Codes must not be separated by spaces, as this will cause the same error.



The field <**Timber No.**> must receive a numeric value and defaults to 0, (see explanation of the sample field below for the situation in which a timber number of 0 would be acceptable).

A <**Timber No.**> is given to individual components within a context/structure, e.g. the timbers within a revetment. Each piece of wood that receives a timber number should have a timber recording sheet filled out for it.

The field <**Sample No.**> Must receive a numeric value, and defaults to 0. Sample may be taken from a piece of wood that already has a timber number, alternatively, a sample may be taken from a piece of timber that does not have a number. For this reason a <Timber No.> and /or a <Sample No.> must be specified, i.e > 0.

The <**Acc Number**> field is for recording the accession number of a timber respectively if one has been recorded/allotted. This generally applies only to timber artifacts.

The <**Sample Type**> must receive one of the following codes; DEND, ID, ART, CHAR, SRS, READ and CORE.

The <**Aly**> (Analysis) records what analysis has been carried out on the sample, and must receive one of the following; I= Identified , D= Dendro analysed, C= Catalogued, A= Assessed and U= Un-measureable.

The fields <**Species**>, <**Rings**>, <**C**>, <**H**>, <**HS**>, <**S**>, <**B**> together form the Assessment of the timber.

The <**Species**> fields requires an arboreal species code to be entered, either directly or by pressing F6 and selecting from the look up list., while the <**Rings**> fields records the number of rings.

The fields <**C**>, <**H**>, <**HS**>, <**S**>, <**B**> relate to presence or absence of Centre wood, Heart wood, Heart wood/Sap wood boundary, Sap wood and Bark respectively. In all cases enter a Y if present, leave null if absent or type a U if you are uncertain.

The <**Location**> field simply records the number of the crate in which the piece of wood is stored. The final <**Comments**> field on screen two , allows for a short 30 character comment to be made.

## 6. Archive Animal Bone Data (Pre-assessment)

### Figure

Screen 1

ARCHIVE ANIMALBONE DATA (Pre-assessment)			
Sitecode	Context	Total weight in context	Number of bags
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

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Press <TAB> to move between fields and the arrow keys to move between rows.  
Press F5 to COMMIT all your entries, updates and deletions.

### Purpose

The purpose of this form is to record summary details of animal bone recovered from larger sites at archive level to inform the assessment phase. The data recorded here is used with other summary data sets from a site to decide which contexts should be taken to the assessment stage.

Although the weight and number of bags are recorded in the main animal bone assessment form, that form, and the one discussed here place data into separate tables. This is because the mandatory fields of the assessment form are not filled out during the pre-assessment, and by using a dedicated pre-assessment form, performance is optimised.

When a site whose animal bones have been pre-assessed in this way has progressed to the point at which the assessment of the animal bone can take place, computing will perform a one off import of the pre-assessment data in a suitable format to the assessment table. In this way the sitecode, context, context weight and number of bags of those contexts which are to be assessed will not need to be entered twice.

### Description

The form consists of one multi-row block arranged on a single screen.

### Minimum to COMMIT

Block 1 <Sitecode>,<Context>,<Weight>,<Bags>

### Block 1

<Sitecode> char 8 NN

<Context> number 5 NN

<Weight> Weight 5,3 NN

<Bags> number 4 NN

The first two fields <Sitecode> and <Context> both require values in the standard manner and format, and during an insertion session <Sitecode> is mirrored when a new row is commenced. The next field total <Weight> in context requires the total weight of all animal bone to be entered up to a maximum of 99.999 kilograms. The final field number of <Bags> defaults to one, and is for recording the total number of bags of animal bone recovered from the context specified.