



ENGLISH HERITAGE

Centre for Archaeology
Scientific Dating Service

Details of Radiocarbon Sample

For Dating Lab use

Lab No

Result

$\delta^{13}C$:

$\delta^{15}N$:

Other lab nos

Please complete this form for every radiocarbon sample which you wish to submit for dating. The detailed information requested is essential for the assessment and full scientific publication of your samples and may be published verbatim. Incorrect or incomplete submissions will cause delay.

Name of site		Ixworth							
Name or code of series		Ixworth							
Your sample reference		Ixworth 239cm							
Type of material Please mark with X									
Animal bone		Charcoal		Leather		Shell		Water	
Antler		Fabric		Peat	x	Slag		Wood	
Bone		Grain		Plant macrofossil		Soil			
Carbonised residue		Human bone		Sediment		Thatch			
Specific identification eg left tibia, <i>Quercus</i> sp., sapwood,				Weight of sample eg less than 5g					
Name of person carrying out identification and institution affiliated to				Date identified					
Collector's name Dr Tom Hill				Date collected		August 2007			
Submitter's name Dr Ben Gearey				Date submitted		August 2007			
Estimated archaeological period Please mark with X									
Palaeolithic	Until 10,000 BP		Post medieval	1540 – 1955 cal AD					
Mesolithic	10,000 BP – 4,000 cal BC		Holocene						
Neolithic	4,000 – 2,500 cal BC	x	GS-1 (Younger Dryas)						
Bronze Age	2,500 – 600 cal BC		GI-1a (Allerød)						
Iron Age	cal BC 600 – 43 cal AD		GI-1b+c (Older Dryas)						
Roman	43 – 410 cal AD		GI-1d+e (Bølling)						
Early medieval	410 – 1066 cal AD		GS-2 (Middle Weichselian)						
Medieval	1066 – 1540 cal AD								

For AML use

AML approval
AML no

Financial year
Deadline

Notes for dating laboratory

Context														
Was the sample Please mark with X	x	Sealed in recognisable layer?												
		Sealed in a localised feature? <i>eg a grave or pit</i>												
		Unstratified												
		Other <i>eg wooden pile foundation</i>												
This is known Please mark with X	x	Confidently												
		Probably												
		Doubtfully												
<p>Stratigraphic details</p> <p>Please give details of the contextual and stratigraphic location of the sample, attaching plan or section. Please discuss the possibility of intrusion or residuality <i>eg inhumation G76 overlying posthole P27 and inhumation G124 and cut by inhumation G128. The skeleton was fully articulated, removing any possibility of disturbance or excarnation.</i></p> <p>Analysis of aerial photographs, LiDAR and grey literature as part of the Suffolk River Valleys Project resulted in the identification of possible organic deposits preserved within palaeochannel features of the River Black Burn, within Mickle Mere, Ixworth. Sedimentary coring within the floodplain identified the presence of peat deposits to a depth of c. 3.50m. A sample core was taken as part of SRVP#2 for further analysis. Due to flooding at the time of fieldwork, sampling was restricted to the margins of the Mere. A 2.40m thick sedimentary sequence was subsequently sampled:</p> <table border="0"> <tr> <td>0-70cm</td> <td>Light grey-brown clayey silt with occasional organics (unsampled)</td> </tr> <tr> <td>70-89cm</td> <td>Dark brown well humified peat with occasional herbaceous fragments</td> </tr> <tr> <td>89-95cm</td> <td>Dark grey-brown silt-rich well humified peat</td> </tr> <tr> <td>95-125cm</td> <td>Dark brown well humified peat with occasional sand and silt horizons within</td> </tr> <tr> <td>125-157cm</td> <td>Medium grey-brown well humified peat with abundant sand and silt</td> </tr> <tr> <td>157-240cm</td> <td>Dark brown herbaceous well humified peat with occasional wood fragments</td> </tr> </table> <p>Sample Ixworth 239cm was taken from the base of a dark brown herbaceous well humified peat unit with occasional wood fragments.</p>			0-70cm	Light grey-brown clayey silt with occasional organics (unsampled)	70-89cm	Dark brown well humified peat with occasional herbaceous fragments	89-95cm	Dark grey-brown silt-rich well humified peat	95-125cm	Dark brown well humified peat with occasional sand and silt horizons within	125-157cm	Medium grey-brown well humified peat with abundant sand and silt	157-240cm	Dark brown herbaceous well humified peat with occasional wood fragments
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Environmental Details

Please give full details of the burial environment of the sample, including local geology, nearness to water table, calcareous environment, rootlet penetration, disturbance etc. *eg grave 1.7m from surface, waterlogged in winter, cut into natural chalk (pH 7.5). Possible contamination from modern septic tank to NW.*

The underlying geology of the area surrounding Mickle Mere comprises predominantly of chalk, chalk till, and glaciofluvial drift and till.

The stratigraphy and sedimentology of the deposits suggests the area initially infilled naturally through biogenic in-situ sedimentation. Thin minerogenic horizons are present within the peat deposits, which may have been accumulated during periods of temporary catchment instability and floodplain flooding. The peat is capped by a layer of silt which is likely to have accumulated through floodplain deposition. Upon removal of the upper silt unit, the natural water table rose to c. 0.25m from the surface. Rootlet penetration was not evident within the core upon extraction.

Objective

Please describe explicitly the relevance of this sample to the specific dating objective(s) of the project. This information should hold good regardless of the final result of the analysis. This is **your** chance to justify the expense of dating **your** samples!

eg to establish the period of use of the cemetery to the W of the church and N of the fourteenth-century boundary ditch, the absolute date of this burial in comparison to G124 which it seals and G128 which cuts it, and to provide useful comparative information for the osteology since this skeleton has also provided a stable isotope measurement ($\delta^{15}N$ 6.2‰).

- To determine the timing of organic sedimentation across the Holocene floodplain.
- To determine the duration of biogenic sedimentation and variations in the rates of sedimentation during the depositional history.

Relationship of sample to objective Please mark with X

x	Certain	The sample came from the object itself <i>eg skeleton in grave</i>
	Very likely	There is a direct functional relationship between the sample and the objective <i>eg coffin in grave</i>
	Likely	The nature and position of the sample suggests a functional relationship <i>eg worked antler in an occupation layer</i>
	Possible	Relationship less obvious because material small and scattered <i>eg bone fragments in grave</i>

Estimated age of sample at death Please mark with X

x	Less than 20 years <i>eg twigs, grain, bone</i>
	Could be several decades but less than 100 years <i>eg charcoal from short lived woody species (eg Corylus avellana, Prunus sp., Pinus sp., Salix/populus sp.)</i>
	Could be centuries old <i>eg charcoal from long lived woody species (eg Quercus sp., Fraxinus sp., Taxus baccata)</i>
	Unknown <i>eg 'dark earth', soil</i>

Sample collection, storage and treatment
<p>How was the sample collected? Please include details of size and type of monolith tins or coring equipment if appropriate <i>eg concentration of charcoal trowelled into polythene bags (double bagged), charcoal separated by water floatation</i></p> <p>Trenching and monolith sampling was not allowed due to the site being a nature reserve. Consequently, the full sequence was extracted using a 7cm Russian Corer to 2.40m depth.</p>
<p>How has it been stored? <i>Eg double bagged in polythene in cardboard box</i></p> <p>Core preserved in 1m sections in guttering, wrapped in the field, sub-sampled and stored in fridge on returning to the laboratory.</p>
<p>Have any preservatives, fungicides, glues etc been used? Please give details of chemicals</p> <p>No</p>
<p>Was the sample waterlogged when collected?</p> <p>No</p>
<p>Has it been dried and if so how?</p> <p>No</p>
<p>Can the whole sample be used for dating?</p> <p>Yes</p>
<p>Is more material available?</p> <p>We could collect more material from appropriate samples</p>
<p>Has this or any related sample been sent to another laboratory for dating? Please give laboratory references and radiocarbon ages</p> <p>No</p>

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