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# **Assessing the palaeoenvironmental and geoarchaeological resource of Suffolk river valleys affected by aggregate extraction**

## Project Proposal Outline

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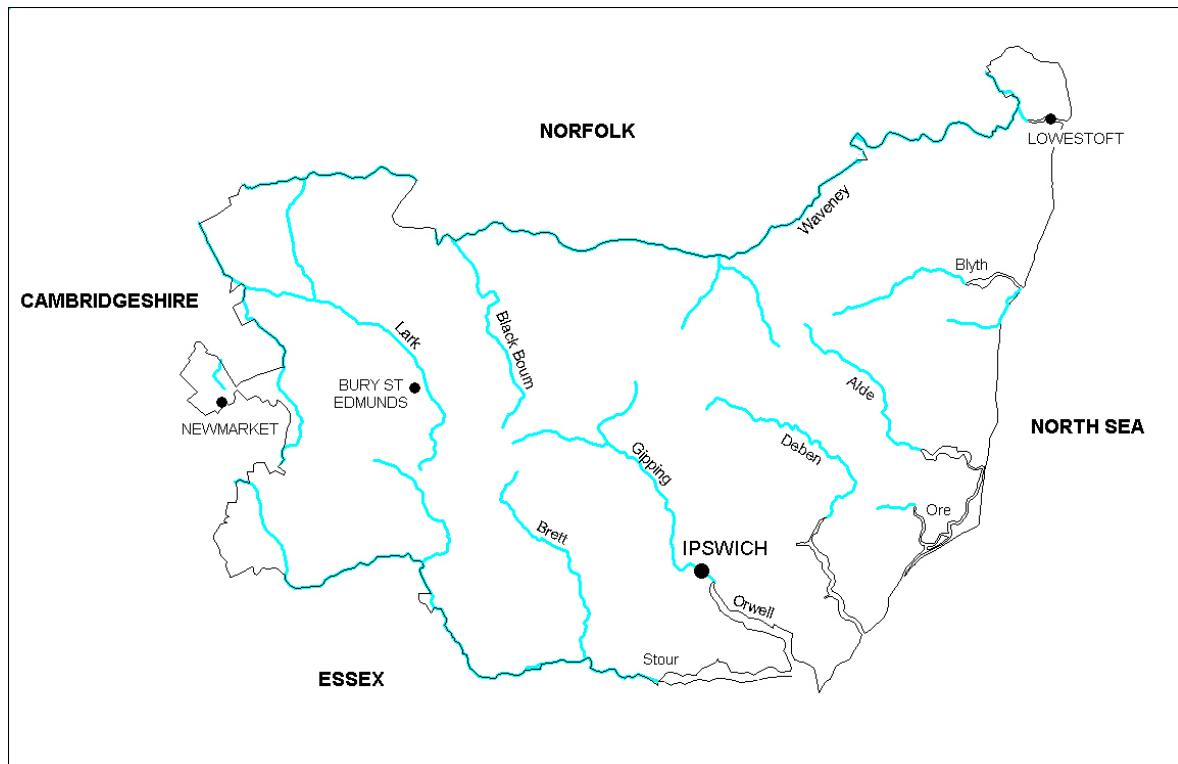
### **1. Introduction**

The Suffolk's river valleys are a major source of sand and gravel extraction, with significant extraction ongoing and current at Flixton on the river Wavney, and at Cavenham and Worlington on the Lark. Some valleys, such as the Gipping, are virtually exhausted of accessible sand and gravel resources. The coastal zone and the lower estuarine areas of the river valleys are afforded some relief through their inclusion within the Suffolk Coasts and Heath ANOB but renewed pressure is likely in any areas without Statutory Protection. In England, a huge corpus of research exists to demonstrate that river valleys have been the focus of intense human activity since earliest Palaeolithic times (Wymer, 1999, Needham and Macklin, 1992, Howard *et al.*, 2003). Heritage managers in Suffolk County Council are fully aware of the threats to the aggregate resource within their region. Whilst other parts of the Suffolk archaeological landscape have been the focus of intensive research investigation, such as the Palaeolithic record (e.g. Wymer, 1999) and development of the agricultural landscape (e.g. Martin and Satchell, forthcoming), the palaeoenvironmental record and archaeological resource of these post-glacial (Holocene) valley floors has been less studied. Furthermore, generic models of alluvial development of such low gradient fluvial systems suggests that the build up of fine grained sediment through overbank sedimentation have probably resulted in the burial of significant archaeological remains within such valley floor environments (Howard and Macklin, 1999).

The lack of archaeological and environmental knowledge with respect to these valleys makes it difficult to provide detailed curatorial advice or to develop a research agenda, which could be implemented via Planning Policy Guidance (PPG) 16. This project proposal outlines a case for obtaining **pilot funding** from the ALSF to undertake a strategic research review and formulate a research framework for these Holocene valley floors. The results of this study would be integrated within the Sites and Monuments Record/Historic Environment Record (SMR/HER) framework of Suffolk County Council to provide curatorial staff with a clear research agenda for implementation as part of the planning

process. This information would also provide a clear policy for community based outreach initiatives, which form an essential part of Suffolk County Councils community participation agenda.

With limited in-house resources to undertake palaeoenvironmental research or to develop strategic research frameworks for alluvial environments, the Archaeology Service of Suffolk County Council has established a research partnership with geoarchaeologists and palaeoenvironmental specialists based within the Institute of Archaeology at the University of Birmingham. Key members of this group (Andy Howard and Keith Challis; see Challis, 2004a&b; Havelock et al., 2004; Yorke *et al.*, 2004) have a track record of undertaking alluvial archaeological research and have been instrumental in the establishment and continued success of Trent Valley Geoarchaeology (a consortium of regional stakeholders ranging from field archaeologists, heritage managers, mineral operators and university academics who have established and are implementing a research agenda for valley floor archaeology), a model which heritage managers within of Suffolk County Council would be keen to develop for their own region.



## 2. Proposed Project

Suffolk County Council already has an Aggregates Levy Sustainability Fund (ALSF) project, The Aggregate Landscape of Suffolk: The Archaeological Resource (PNUM 3987), which is developing a historic environment research and management framework for all the mineral resource areas primarily through SMR/HER enhancement and analysis. Begun in late March 2005 the work has focused on sources of unpublished archaeological data such as excavation archives, reports and the aerial photographic collection held in Suffolk and Swindon, and adding this to the SMR/HER. This work has identified that the assessment and understanding of the palaeoenvironmental record in the river valleys is a fundamental gap in knowledge. Accessing and understanding the palaeoenvironmental archives of the river valleys of Suffolk is one of the key themes identified in the regional Research Framework (Brown *et al* 2000). Linking palaeoenvironmental investigations and aerial

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photography has been identified as potentially the most valuable technique in this region (e.g. Brown and Murphy 1997) particularly for the prehistoric period.

The primary aims of this proposal is therefore to obtain **pilot funding** from the ALSF to:

- *To provide baseline data determining the geomorphological character of selected Suffolk valley floors and the potential of the landforms and sediments recorded within them for palaeoenvironmental reconstruction.* This would be achieved through a combination of mapping of valley floors, primarily using geo-rectified aerial photographs already held within Suffolk County Council's geographical information system (GIS) (see Baker, 2003). The potential for other remotely sensed data, particularly Light Detection and Ranging (LiDAR) would also be assessed (the project team are currently in negotiation with the Environment Agency and moving towards a collaborative partnership). Limited palaeoenvironmental field survey and assessment (pollen, coleopteran and plant macrofossils) supported by targeted radiocarbon dating of critical horizons would be the third element.
- *To provide an assessment of the potential for the preservation of archaeological remains within Suffolk valleys through an understanding of their geomorphological history.*
- *To review and collate both the grey and published palaeoenvironmental and geoarchaeological literature into a single volume, chronologically ordered review. Initially, it will constitute an unpublished grey report for distribution to key regional heritage managers (e.g. within Suffolk County Council, English Heritage and other organisations such as the Environment Agency).*
- *To assess the potential impact of groundwater changes on the historic environment and associated sediments (see French, 2004).*

This project will be linked directly to the Aggregate Landscape of Suffolk project. Both projects have common goals and themes,

- *To provide additional data, which is complimentary to the Aggregate Landscape of Suffolk project, and compatible with the aims of that project. This will enhance the themes identified in the research frameworks and enable the continued formulation of the regional research agenda. Projects that could be implemented through research funded either by research councils or developer-funded activities will also be identified.*
- *To use the findings of this study alongside the data provided by the Aggregate Landscape of Suffolk project to enhance the county SMR/HER. The information should aim to be as complimentary as possible and a full integration of the results of the two projects will be an achievable outcome. This will provide curators and other heritage managers with information to assist them in the decision-making process associated with development activities.*
- *To provide a framework for the development of a closer working relationship between: Suffolk County Council, English Heritage, the Birmingham University, and other stakeholder organisations such as the Environment Agency. Policies over the coming few decades, such as managed retreat, will have significant implications for the archaeology of the river valleys and coastal margins of Suffolk*

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As well as addressing issues specifically related to archaeology, **value-added** dimensions of this research will contribute information to:

- *Agri-environmental schemes and their enhancement.*
- *Promote greater awareness of historic environment issues and the value of the historic environment among partners and stakeholders.*

### **3. Proposed Timetable**

Assuming agreement for the development of a Project Design by 10<sup>th</sup> January 2006, a full project design (FPD) could be submitted by January 31<sup>st</sup> 2006. If agreement of this FPD were received quickly, the Pilot Project, we would aim to start this project on March 1<sup>st</sup> 2006. We envisage this initial project would take 12 months to complete from commissioning. At the end of this study, an Updated Project Design would be completed with recommendations for further work.

<b>Task</b>	<b>Estimated program</b>
Desktop assessment, LiDAR analysis etc.	March-April 2006
Fieldwork and analyses	May-July 2006
Data assimilation, reporting and archive	August 2006

### **4. Estimated Costs**

*[Costs have been removed from this document]*

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