SUMMARY

This report presents the results of the ALSF Ribble Valley Aggregate Extraction project, which was a study of the aggregate and archaeological potential of the Lower and Upper Ribble Valley; the study area originally extended between Preston, in Lancashire and Settle in the Craven District of North Yorkshire, although during the course of the project more emphasis was placed on a study of the Lower Ribble Valley and the results are presented in ths report. The work was undertaken between May 2005 and December 2006 as a joint project between the University of Liverpool Geography Department and Oxford Archaeology North (OA North), and was funded by the Aggregates Levy Sustainability Fund (ALSF) under the overall management of English Heritage. The responsibility of the project was split such that the University of Liverpool undertook the geological and geomorphological elements of the project whilst OA North undertook the archaeological elements, and the palaeobotanical elements were undertaken jointly.

The geomorphological objectives of the project were to collate evidence on all past and present aggregate extraction, produce revised estimations and mapping of suitable resources for future extraction, and produce mapping of present and future geomorphological change. The archaeological objectives were to collate evidence for all archaeological activity and, by the means of an exhaustive survey of LiDAR, aerial photography, field survey and other methods, find new archaeological sites and assess the potential for sites within areas of potential extraction. The data were assimilated into a GIS system, which was integral to the project, and the archaeological data and geomorphic data were subject to spatial analysis to provide an assessment of the areas of greatest potential for each element. A final objective was to integrate these two strands and assess the potential impact of aggregate extraction or geomorphological change on the archaeological resource.

The University of Liverpool has produced an extensive re-mapping of the available aggregate reserves and geology within the study area. This has led to an assessment demonstrating that substantial reserves are available, but many are difficult to extract, given the environmental and statutory constraints. Mapping geomorphological change within the study area has demonstrated a considerable degree of change within the Upper Ribble Valley both of erosion and deposition, but less within the Calder and Hodder Valleys. Change within the Lower Ribble Valley appears to be mainly restricted to sedimentation. Future geomorphological change, based on a model of increased winter rainfall, is likely to intensify this pattern, with increased erosion in the Upper Ribble Valley and increased sedimentation in the Lower Ribble.

A survey of the archaeological resource using LiDAR and aerial photography was extremely successful, identifying new sites and improving classification of those already identified. Collating the enhanced resource and examining its location in relation to environmental and topographic factors, such as slope and distance to water, suggested considerable potential for buried archaeology within the study area. When superimposed upon the mapping of geomorphological change and aggregate extraction suitability within the GIS, there appeared to be areas where both known and potential buried archaeology could be under threat.

Recommendations have been made about further work within the region, following on from the discovery by the University of Liverpool of considerable mineral reserves in the Kirkham area, and the potential for the use of hard geological sources for aggregate in the Craven District of North Yorkshire.