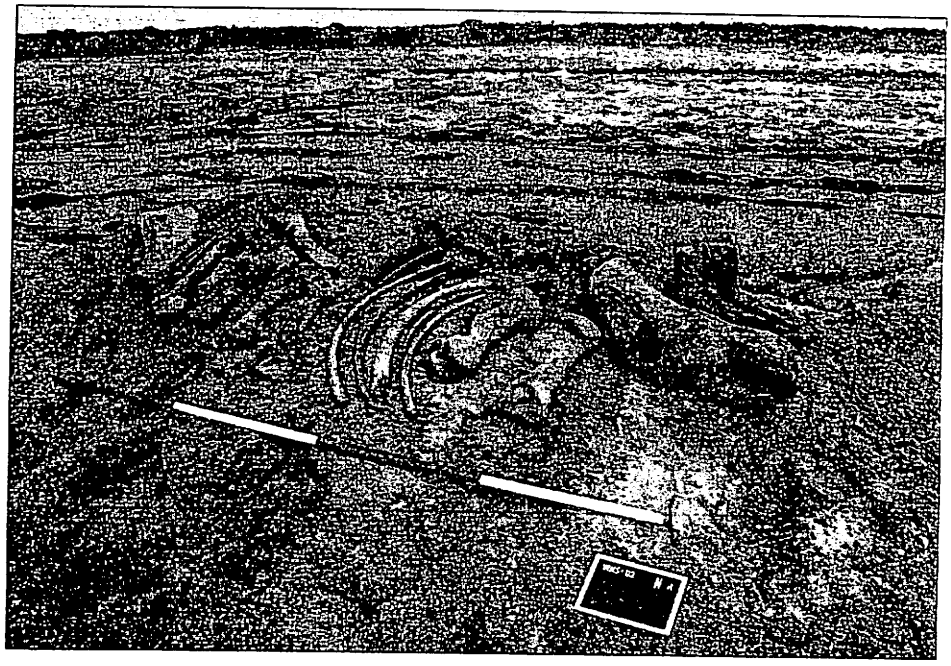
TOM - From Keep, for your interest

Woolly rhino unearthed in Staffordshire quarry

Bill Klemperer, Principal Historic Environment Officer with Staffordshire CC, describes a recent important ice age discovery.



A major archaeological discovery was unearthed in a quarry in Staffordshire in October. The chance find was made by Ray Davies, a worker at the Lafarge Aggregates sand & gravel quarry at Whitemoor Haye near Alrewas, who was surprised when he pulled up the massive skull of a woolly rhino in the bucket of his digger. Archaeologists from the University of Birmingham supervised the recovery of the partial skeleton which dates back to the Ice Age.

Archaeology is a material consideration in the planning process and digs are often undertaken in advance of development so that finds are not needlessly destroyed. Government guidance is given by PPG16, Archaeology and Planning, issued in November 1990. An article on archaeology last featured in **Mineral Planning 90** (p.4).

In Staffordshire my post in the Development Services Department means that I oversee the process. I head a team of four who work with County and District Council planning officers, developers, agents, architects etc to ensure that digs take place on sensitive sites where developments are taking place. We also deal with listed buildings, conservation areas and anything else to do with the historic environment.

Gravel extraction is a major industry in the Trent and Tame valleys of south east Staffordshire. The area has a lot of recorded archaeology, especially from the Iron Age and Roman periods. Archaeological digs have taken place on those sites that were recognised from aerial photographs and surveys, but it is not always possible to predict what may turn up from deep down in the gravel. The gravel deposits comprise former river courses where people and animals would have gathered thousands of years ago. Because of this, at Whitemoor Haye Staffordshire CC working with Lafarge prepared a specification for archaeological investigation, and Birmingham University Field Archaeology Unit was eventually appointed to carry out the work. The extraction is covered by an 'Archaeological Watching Brief' that ensures archaeologists are at hand if important remains are unearthed at any point in the quarrying process. This ensured that archaeologists were on hand when the skull of the woolly rhino turned up in the excavator bucket at the Lafarge quarry.

Initially the rhino remains were taken to the University's archaeological unit for cleaning and identification. The rhino, believed to have died 30 – 40 thousand years ago and to have weighed approximately one and a half tonnes, has now been donated to the Natural History Museum in London to be conserved and displayed.

Andy Currant, a palaeontologist from the Natural History Museum has studied the remains and deemed the bones to be exceptionally well preserved - usually remains have been scavenged by predators and only fragments survive. He regards the remains as the best example of a woolly rhino he has ever seen.

The dig also uncovered the remains of mammoth, reindeer, wild horse and a wolf as well as plants and beetles that provide an extraordinarily detailed picture of the freezing environment in which the rhino lived and died.

Regional Planning Manager for Lafarge Aggregates, Ross Halley, said: *"Many of our sites are rich in historical finds, but this is one of the most significant, so we were keen to involve the specialists and co-operate in the excavations. Quarrying is one way archaeologists can quickly search large areas of land, especially where the ground is not suitable for traditional search methods."*

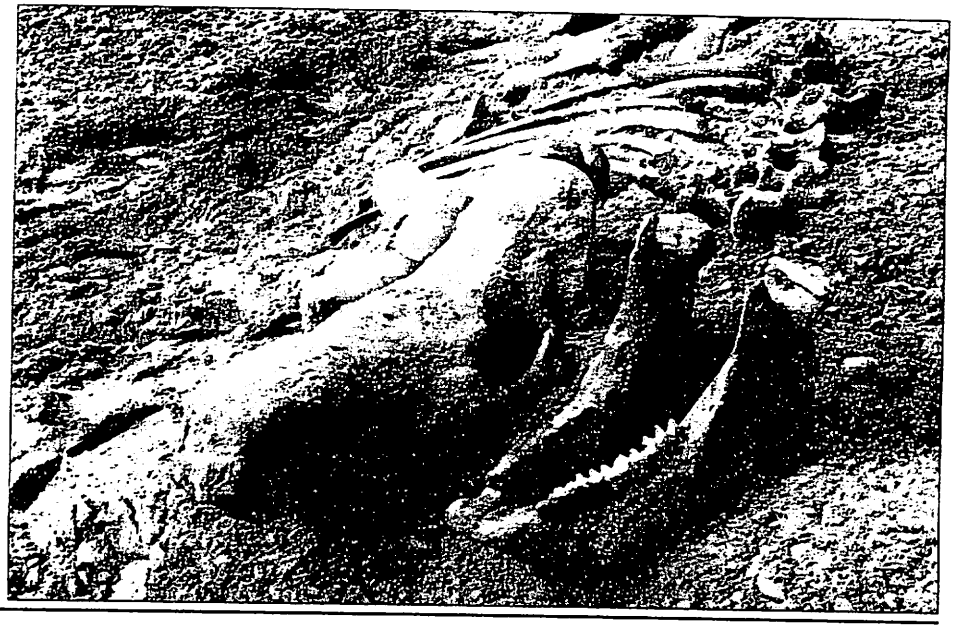
Further excavation is being funded by English Nature through their Aggregates Levy Sustainability Fund Grants Scheme to find the remainder of the rhino. Natalie Bennett from English Nature said: *"We were delighted to be able to support this project through our Sustainability Fund Grants Scheme as finds of this calibre are unusual. The Fund provides us with the opportunity to work with Lafarge Aggregates to ensure specialists are able to study the woolly rhino and the surrounding sediments before the company continue to extract the sand and gravel."*

The team of archaeologists and other specialists involved at the quarry are from the Universities of Birmingham, Coventry, Cambridge and Royal Holloway, London and the Natural History Museum.

This is a very exciting and important discovery. The case shows clearly why it is so important for archaeology to be planned into the process of 'winning' aggregates so that information about the past can be preserved to the benefit of our sense of identity, as well as for academic, education and leisure purposes. Staffordshire has consistently been one of the largest County producers of land won sand and gravel for many years and so it seems that there will be on-going archaeological work for the foreseeable future at quarries in the County. Who knows what the next discovery may be!

Woolly rhino in sand and gravel quarry

A major archaeological discovery was unearthed in a quarry near Alrewas in Staffordshire in October. The skeleton dates back to the Ice Age and is exceptionally well preserved. The remains, described as the best example seen of a woolly rhino, have been donated to the Natural History Museum in London to be conserved and displayed. Bill Klemperer, Principal Historic Environment Officer with Staffordshire CC, describes the discovery on page 10.



Glensanda time limits increased

An application by Foster Yeoman Ltd for the removal of time limits on existing quarrying planning permissions at Glensanda Coastal Quarry, Morvern, Lochaber, was approved by the Highland Council in August. The quarrying operations at Glensanda were permitted until January 2015. At present rates of extraction, however, there were sufficient granite resources within the existing permitted quarry area to support aggregates production for over 60 years. This is the sixteenth year of coastal exports from the site which has an extensive and sophisticated quarrying and shipping infrastructure. The operators required to make significant ongoing investments to maintain and improve aggregates production and requested removal of time limits in order to make such investment more secure. The application was accompanied by a formal Environmental Assessment.

Glensanda remains the only major coastal export quarry in the UK and began operations in the mid-1980s (see **Mineral Planning 11** & **30**). Currently producing 6Mtpa of granite aggregates, the site is entirely serviced by its own harbour infrastructure on Loch Linnhe, and the entire product output is exported by ship. Aggregates go mainly to the Clyde, Southampton and the Thames estuary within the UK, and about a similar quantity is exported to the North European mainland via Rotterdam and Hamburg. A recent aggregates washing facility at the site produced quantities of silt waste which now forms a raw material for added value secondary manufacturing of a variety of concrete products at Glensanda; a lightweight aggregate facility was reported in **Mineral Planning 90** (p.50). These products are also all exported by sea from the site. An Act of Parliament made the site operators a statutory Port Authority.

The operators stated that approximately £50M has been invested in the quarry so far with an annual revenue spend of about £15M. Direct employment at the site is 175 jobs (33 from the Highlands) with an annual wage bill of £4.5M. There has also been a significant annual investment in apprenticeships at the site and a large, highly skilled workforce has gradually been established. Site development has been, and is expected to continue to be, a permanent ongoing feature of the site and this often involves up to 20 contractors at any one time, many of which are established Highland companies.

Eventually the whole working quarry area will disappear from view entirely except from directly above, leaving the lower aggregates processing, storage and shiploading infrastructure along the coastal edge as the only visual disturbance beyond the site boundary during the latter phases of production.

None of the consultees objected to a continuation of the working subject to appropriate safeguards and conditions. No public representations were received. The Council organises regular review of issues arising at the quarry through the Glensanda Liaison Committee; it noted that the quarry generally operated high standards of housekeeping and environmental protection and the operators had a good record of ongoing restoration and mitigation of environmental impacts. The existing planning conditions had been reviewed and brought up to date.

Taking account of the extent of the granite reserve within the existing permitted area of quarrying, and the extent and scale of investment at the site, a period of 40 years at Glensanda was recommended and approved. A 40 year permission would be subject to periodic review twice at 15 and 30 years after initial approval. From the outset all restoration requirements were the subject of a S75 planning agreement to provide financial guarantees in the event of default and the applicants were happy to continue to make such provision through an ongoing formal agreement.

Highland Council observed that coastal quarries would continue to be one of the most sustainable and efficient ways of meeting primary aggregates demand compared with production from smaller rock quarries and especially sand and gravel sources. Glensanda therefore made a significantly positive contribution to sustainable long term aggregate production.