

# Reconstructing and using the Pentrwyn pit furnaces. Late Bronze Age copper smelting on the Great Orme.



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# Pentwyn Bronze Age copper smelting site: Reconstructing and using the Pentwyn pit furnaces

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## Summary

Evidence for small-scale copper smelting dating to the Bronze Age has been identified at Pentwyn, Great Orme. This evidence was in the form of copper smelting debris (copper metal and slags) and three very small pit features. This short paper examines the evidence; records our successful attempt at reconstructing the pit features as small, assaying furnaces and briefly discusses the implications of the results.

## Introduction

In 1997, David Chapman of Ancient Arts identified eroding deposits on the Great Orme, Llandudno. These deposits contained fragments of charcoal, shells, bone and metal working debris in the form of small, prills of copper metal (less than 50mm in diameter) with adhering fragments of slag like material. The potential importance of this site was significant as it is located less than one kilometer from the remains of the most extensive Bronze Age copper mine known in the UK. At the time of its discovery and subsequently no associated smelting sites or settlement sites have been found on the Great Orme. Indeed, no Bronze Age smelting sites have been positively identified in the UK.

As a result Cadw funded Gwynedd Archaeological Trust to undertake two excavations (one in 1998 and one in 2011) to recover any surviving remains. A third 'rescue' excavation was undertaken in 2005 by the authors to record and recover information exposed by an episode of severe erosion.



The site seen from the road. The excavations took place on the top terrace. Note the erosion of material.



All that was left of the original terrace, with the road below.

## **The 1998 excavation**

This excavation removed an area of 2.2m by 1.8m down to the buff coloured clay that was found across the whole site.