

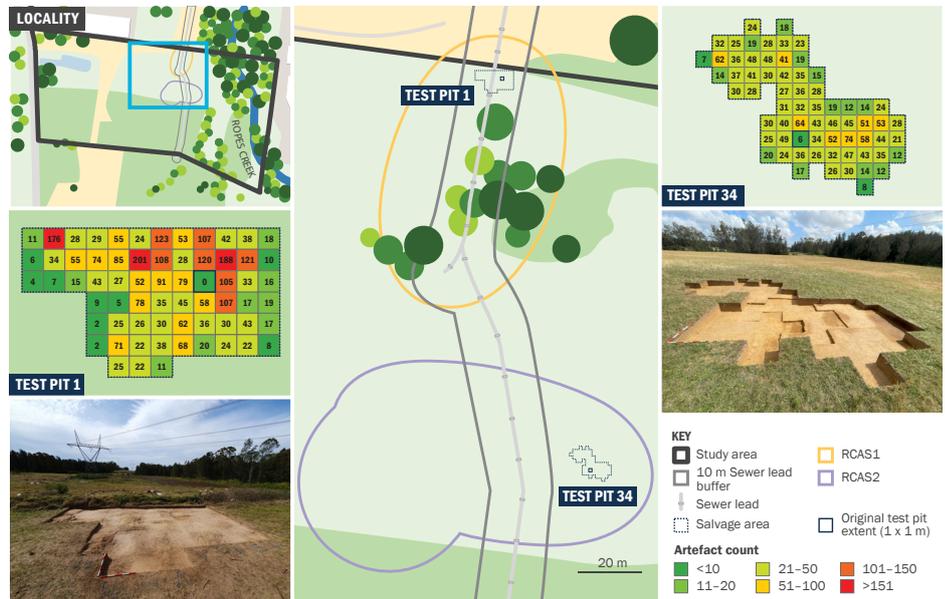
A late Holocene Aboriginal workshop on the banks of Ropes Creek, Cumberland Plain: A critical node in the movement of silcrete across the Sydney Basin.

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Abstract

The Cumberland Plain in western Sydney has been the subject of over 80 years of academic and cultural heritage management investigation. These investigations suggest that the bioregion was most intensively used during the late Holocene, with activity centred on the extraction and exploitation of high-quality silcrete from Riverstone and Plumpton Ridge in the northwest. This raw material played a critical role in the development of increasingly complex stone tool technologies, likely driven by heightened hunting pressures linked to population growth and the emergence of more defined sociopolitical boundaries. Urban development in the southwest has produced few archaeological materials, leaving uncertain how far this silcrete was transported or exchanged across the broader region. In advance of residential development, EMM and Darug Traditional Owners conducted a compliance-based investigation along Ropes Creek. The assemblage is dominated by silcrete raw materials sourced from northwest Sydney and reflects evidence of substantive heat treatment, early core testing and refining, as well as exhausted tools. These all suggest that the site formed an important node as part of a distribution network of silcrete into southwest Sydney.



Overview of the salvage excavation program and salvage pit results. **Top left:** local context of the project area showing the salvage excavation program. **Centre:** location of salvage excavation areas within artefact scatter sites RCAS1 & RCAS2. **Middle left:** Test Pit 1 (RCAS1) showing artefact density per 1 m². **Bottom left:** overview of Test Pit 1 (RCAS1), view north. **Top right:** Test Pit 34 (RCAS2) showing artefact density per 1 m². **Middle right:** overview of Test Pit 34 (RCAS2), view north. **Bottom right:** key.

Introduction

With the establishment of the western Sydney airport, commercial and residential development in the typically rural southwest Sydney is intensifying. These investigations provide an opportunity to understand the past use of southwest Sydney (Darug, Gandungara, and Dharwal Country) that have historically been understudied.

EMM Consulting Pty Ltd has been undertaking assessment of a proposed residential development in Luddenham that situates on the banks of Ropes Creek in the suburb of Kemps Creek. This has included consultation with traditional owners and on-Country activities, including survey and archaeological excavations. Following an exploratory phase where key areas of buried stone artefacts were encountered, a more extensive recovery of cultural materials was undertaken.

Methods

A team of archaeologists and Indigenous traditional owners undertook manual excavations focusing on two test pits identified as part of an earlier phase of work. These test pits were both situated on elevated slopes overlooking, and within 100 m of Ropes Creek. Excavations consisted of 1 m² test pits expanding from these initial locations and up to 133 m² ultimately. They were undertaken in 5 cm spits to depths of ~50 cm, with all sediment wet-sieved for cultural materials. A range of chronological and palaeoenvironmental samples were also recovered.

Results

The excavations revealed a shallow duplex soil profile. Some 5,838 stone artefacts were recovered primarily from 5-20 cm below surface, which OSL ages indicate was discarded intermittently between 1,500 – 500 years ago. Deeper parts of the soil profile that were culturally sterile suggest initial formation of the landscape occurred ~23,000 years ago, and provide further suggestion that the use of this specific locale was relatively recent.

The assemblage was dominated by a range of local silcrete raw materials, although evidence suggests that they were sourced from palaeochannels known to be present in northwestern Sydney, rather than the nearby Ropes Creek. The two excavated areas revealed slightly different characteristics with one suggesting more expedient use of the creek and primarily early reduction of cobbles and raw materials, while the other was more intensely used with numerous formal tool types indicative of hunting and woodworking. Heating of the assemblage to reduce the silcrete was also prevalent in the record. Notably, the former location was used earlier in time than the latter and suggests increasing landscape use and intensity just prior to colonial invasion.

Discussion

Regionally, populations were increasing during the last Holocene, and archaeological evidence suggests a greater use of the Cumberland Plain than previously occurred during the last few thousand years.

Given the significance of Ropes Creek and its proximity to known silcrete raw materials, its continued and more intense use during this period of population amalgamation is to be expected. Here, we show that initial use of the locale was expedient and opportunistic. However, subsequently, the increasing appearance of tools suggests that localised hunting and woodworking was occurring in the general vicinity, and the repeated need to repair and/or replace equipment – all indicative of longer and more frequent use.

Given the strategic location of the site situated partway along Ropes Creek that runs through known major sources of silcrete raw material near the Hawkesbury-Nepean River and into the southwest Cumberland Plain, we consider this a probable node on the movement of silcrete across the region. It strongly suggests that a greater focus on Ropes Creek than has previously occurred should form a focus of future research. Understanding these discrete nodes, their past activities and visitation, may provide further insight into the use of the southern Cumberland Plain in the late Holocene.

NOTES: We acknowledge that the Darug people of western Sydney region are the traditional owners of the study area and have lived in connection with the landscape for millennia. As the cultural custodians, a range of Darug and locally based Aboriginal traditional owners participated in the project.